

E-TENDER SPECIFICATION

| | |
|---------------|---|
| S. No. | E- TENDER SPECIFICATION NUMBER |
| 01 | BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004 |

FOR

PART-A: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS FOR MAIN PLANT AREA AND BOPS INCLUDING FGD, SCR & OTHER RELATED TO MOEF NORMS AND PART-B: CONSTRUCTION OF 275M HEIGHT RCC SINGLE FLUE CHIMNEY WITH BOROSILICATE GLASS BLOCK LINING ON INNER SURFACE OF STEEL FLUE CAN INCLUDING SUPPLYING AND INSTALLATION OF ELECTRICAL ITEMS AT 1X660 MW BHUSAWAL TPS, MAHARASHTRA.

VOLUME I - TECHNICAL BID

THIS TENDER SPECIFICATION CONSISTS OF:

| | |
|-------------------------------|---|
| Notice Inviting Tender | |
| Volume-IA | Technical Conditions of Contract |
| Volume-IB | Special conditions of Contract |
| Volume-IC | General conditions of Contract |
| Volume-ID | Forms & Procedures |
| Volume-IE | Technical Specifications and Plot Plan |
| Volume II | Price Bid |



Bharat Heavy Electricals Limited
(A Government of India Undertaking)
Power Sector - Western Region
345-Kingsway, Nagpur-440001

CONTENTS

| Volume No | Description | Hosted in website bhel.com (Briefly) and detailed in BHEL e-Procurement Portal as files titled |
|-----------|--|--|
| NIL | Tender Specification Issue Details | (Part of <u>Vol-IA-3004</u>) |
| NIL | Notice Inviting Tender | (Part of <u>Vol-IA-3004</u>) |
| I-A | Technical Conditions of Contract | Vol-I-A-3004 |
| I-B | Special Conditions of Contract | Vol-I-BCD-3004 |
| I-C | General Conditions of Contract | (Part of Vol-I-BCD-3004) |
| I-D | Forms & Procedures | (Part of Vol-I-BCD-3004) |
| I-E | Technical Specifications and Plot Plan | Vol-IE-3004 |
| II | Price Bid Specification as specified in E-Procurement Portal | Volume-II-3004 |

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| 01 | BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004 |

FOR

PART-A: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS FOR MAIN PLANT AREA AND BOPS INCLUDING FGD, SCR & OTHER RELATED TO MOEF NORMS AND PART-B: CONSTRUCTION OF 275M HEIGHT RCC SINGLE FLUE CHIMNEY WITH BOROSILICATE GLASS BLOCK LINING ON INNER SURFACE OF STEEL FLUE CAN INCLUDING SUPPLYING AND INSTALLATION OF ELECTRICAL ITEMS AT 1X660 MW BHUSAWAL TPS, MAHARASHTRA.

EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

LAST DATE FOR TENDER SUBMISSION Refer Notice Inviting Tender

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING VOLUME-I AND VOLUME- II ARE ISSUED TO:

M/s.

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PLEASE NOTE:
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

AGM (Purchase)

Place: Nagpur

Date:

3004

NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 5 of 90

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Date: 24/04/2019

NOTICE INVITING E-TENDER (NIT)

NOTE: BIDDER MAY DOWNLOAD/ UPLOAD THE TENDER/ OFFER FROM/ON BHEL E-PROCUREMENT PORTAL → <https://bhel.abcprocure.com>

To,

Dear Sir/Madam,

Sub : NOTICE INVITING E-TENDER

Offers are invited in two part bid system from reputed & experienced bidders (meeting [PRE QUALIFICATION CRITERIA](#) as mentioned in Annexure-I) through **E-procurement portal → <https://bhel.abcprocure.com>** only for the subject job by the undersigned on behalf of BHARAT HEAVY ELECTRICALS LIMITED as per the tender documents. Following points relevant to the tender may please be noted and complied with:

Note: **The bidder should respond by submitting their offer online only in our e-Procurement platform at <https://bhel.abcprocure.com>. No Hard copy bid/ bids through email/ fax shall be accepted.**

1.0 Salient Features of NIT

| S No. | ISSUE | DESCRIPTION | |
|-------|--|---|-------------------|
| i | E-TENDER NUMBER | BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004 | |
| ii | Broad Scope of job | PART-A: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS FOR MAIN PLANT AREA AND BOPS INCLUDING FGD, SCR & OTHER RELATED TO MOEF NORMS AND PART-B: CONSTRUCTION OF 275M HEIGHT RCC SINGLE FLUE CHIMNEY WITH BOROSILICATE GLASS BLOCK LINING ON INNER SURFACE OF STEEL FLUE CAN INCLUDING SUPPLYING AND INSTALLATION OF ELECTRICAL ITEMS AT 1X660 MW BHUSAWAL TPS, MAHARASHTRA. | |
| iii | DETAILS OF TENDER DOCUMENT | | |
| A | Volume-IA | <i>Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc.</i> | <i>Applicable</i> |
| B | Volume-IB | <i>Special Conditions of Contract (SCC)</i> | <i>Applicable</i> |
| C | Volume-IC | <i>General Conditions of Contract (GCC)</i> | <i>Applicable</i> |
| D | Volume-ID | <i>Forms and Procedures</i> | <i>Applicable</i> |
| E | Volume-IE | <i>Technical Specifications and Plot Plan</i> | <i>Applicable</i> |
| F | Volume-II | <i>Price Bid as specified in E-Procurement Portal</i> | <i>Applicable</i> |
| iv | Issue of Tender Documents | From https://bhel.abcprocure.com <i>(Tender documents will be available for downloading from BHEL e-Procurement website till due date of submission)</i> Brief information of the tender shall also be available at Central Public Procurement portal (https://eprocure.gov.in) and BHEL website (www.bhel.com). | <i>Applicable</i> |
| v | DUE DATE & TIME OF OFFER SUBMISSION | Date: 09/05/2019, Time: 15.00 Hrs Place: on E-Tender Portal https://bhel.abcprocure.com | <i>Applicable</i> |

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Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 6 of 90

| S No. | ISSUE | DESCRIPTION | |
|-------|---|---|----------------|
| | | <ul style="list-style-type: none"> Offer to be submitted online only through e-procurement Portal | |
| vi | OPENING OF TENDER (Techno-Commercial Bid) | <p>Date: 09/05/2019, Time: 16.00 Hrs</p> <p>Notes:</p> <p>(1) In case the due date of opening of tender becomes a non-working day, then the due date & time of offer submission and opening of tenders get extended to the next working day.</p> <p>(2) This tender being an e-tender, it shall be opened online only through the E-Procurement Portal. Participating bidders may witness the Opening online only.</p> | Applicable |
| vii | EMD AMOUNT | <p>Rs. 2,52,50,000/- (Rupees Two Crore Fifty-Two Lakhs Fifty Thousands only)</p> <p>[To be submitted in the form and manner as mentioned below]</p> <p>Important Note: Bidders kindly take note that EMD (Earnest Money Deposit) shall be furnished by MSE bidders as well, as per the amount and procedure indicated in the NIT/GCC.</p> | Applicable |
| viii | COST OF TENDER | <p>Rs 2000/-</p> <p>[To be submitted in the form and manner as mentioned below]</p> | Applicable |
| ix | LAST DATE FOR SEEKING CLARIFICATION | Three days before the due date of offer submission. Along with soft version also, addressing to undersigned & to others as per contact address given below. | Applicable |
| x | SCHEDULE OF Pre Bid Discussion (PBD) | --- | Not-Applicable |
| xi | INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM) | <p>Mrs. Pravin Tripathi, IA & AS (Retd.) and Shri D R S Chaudhary, IAS (Retd),</p> <p>(Please refer Annexure-04 "Important Information" of NIT for more details)</p> | Applicable |
| xii | Latest updates | Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage (www.bhel.com -->Tender Notifications →View Corrigendum), Central Public Procurement portal (https://eprocure.gov.in) & on e-tender portal https://bhel.abcprocure.com and not in the newspapers. Bidders to keep themselves updated with all such information. | |

2.0 The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, duly **digitally** signed on each page, as part of offer. **Rates/Price including discounts/rebates, if any, mentioned anywhere/in any form in the techno-commercial offer other than the Price Bid, shall not be entertained.**

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**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 7 of 90

~~3.0 Unless specifically stated otherwise, bidder shall remit cost of tender and courier charges if applicable, in the form of Demand Draft drawn in favour of Bharat Heavy Electricals Ltd, payable at Power Sector Regional HQ at Nagpur issuing the Tender, along with techno-commercial offer. Bidder may also choose to deposit the Tender document cost by cash at the Cash Office as stated above against sl no iv of 1, on any working day. Copy of Cash receipt or the proof of Demand Draft duly **digitally** signed is to be uploaded with the Techno Commercial offer **on e-tender portal <https://bhel.abcpocure.com>**. However Original Demand Draft shall be sent to the officer inviting tender within a reasonable time failing which the offer is liable to be rejected. Sale of tender Documents shall not take place on National Holidays, holidays declared by Central or State Governments and BHEL PS HQ at _____, Sundays and second/ last Saturdays.~~

4.0 Unless specifically stated otherwise, bidder shall deposit EMD as per the provisions in General Conditions of Contract Clause no. 1.9.1. In case of remittance of EMD through **Demand Draft/Pay Order**, same shall be in favour of **Bharat Heavy Electricals Ltd**, payable at Nagpur. **In case of remittance of EMD through Bank Guarantee (for the balance EMD amount in excess of Rs 2 Lakhs) OR through FDR**, refer General Conditions of Contract Clause no. 1.9.1(iv). Proforma of Bank Guarantee for Earnest Money shall be as provided in Vol-ID "FORMS & PROCEDURES". For other details and for 'One Time EMD' please refer General Conditions of Contract.

In case of remittance of EMD through Electronic Fund Transfer, Bank account details of BHEL PSWR to be used is as below: -

| | |
|-------------------------------------|---|
| NAME OF THE COMPANY | BHARAT HEAVY ELECTRICALS LTD |
| ADDRESS OF THE COMPANY | SHREE MOHINI COMPLEX 345, KINGSWAY,NAGPUR |
| NAME OF BANK | STATE BANK OF INDIA |
| NAME OF BANK BRANCH AND BRANCH CODE | SBI,KINGSWAYBRANCH,BRANCH CODE-00432 |
| CITY | NAGPUR |
| ACCOUNT NUMBER | 31380025872 |
| ACCOUNT TYPE | CURRENT A/C |
| IFSC CODE OF THE BANK BRANCH | SBIN0000432 |
| MICR CODE OF THE BANK BRANCH | 440002002 |

Above bank account, details can be used for remittance of Security Deposit as well by the successful tenderer.

| Procedure for Earnest Money Deposit | | | | | |
|--|---|--|---|---|---|
| Description/ Mode of Submission | EFT | Cash | DD/Pay Order | FDR (Refer GCC clause no 1.9.1(iv) for FDR) | Bank Guarantee (Refer GCC clause no 1.9.1(iv) for Acceptable Portion of EMD in the Form of BG) |
| Proof of EMD along with the offer | | | Scan Copy has to be uploaded | Scan Copy has to be uploaded | Scan Copy of BG has to be uploaded. |
| Submission of EMD to BHEL PSWR, Nagpur | Receipt of Amount Transferred into BHEL Account | Receipt of cash deposit at BHEL office | Original DD/ Pay order to be sent through Registered Post | The Original FDR to be sent through Courier/Post to BHEL PSWR Nagpur. | The Original Bank Guarantee/any extensions /amendments shall be sent directly by the Bank to BHEL under Registered Post (Acknowledgement Due), addressed to the Purchase Department, BHEL PSWR, Nagpur. |

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 8 of 90

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~~Copy of One Time EMD Certificate or~~ The proof of Demand Draft/ Payorder/FDR or BG or receipt of Electronic Fund Transfer duly **digitally** signed is to be uploaded with the Techno Commercial offer on '**e-tender portal**' → <https://bhel.abcprocure.com>. In case of Demand Draft/ Payorder/FDR/BG, Original Demand Draft/ Payorder/FDR/BG shall be sent to the officer inviting tender within a reasonable time failing which the offer is liable to be rejected.

5.0 Procedure for Submission of Tenders:

Procedure for Submission of Tender is available in the "[Bidder Manual for BHEL Bidders](https://bhel.abcprocure.com)" at E-tender portal <https://bhel.abcprocure.com>. Terms and conditions mentioned therein shall form integral part of the NIT and bidders shall abide by the same.

a) Hardware and Software requirements for participating in e-tender:

- ❖ Please refer the website for the minimum system requirements and setting document for Bidders under the link: <https://bhel.abcprocure.com>

b) Digital Signature

- ❖ To know the procedure for obtaining Digital Signature Certificate (DSC), suppliers who are not having the DSC are advised to visit our website www.bhel.com → Tender Notifications → Sample Checklist.

c) M/s E-Procurement Technologies Limited Helpdesk Contacts:

During normal business hours, helpline maintained by the service provider e-Procurement Technologies Limited is available for clarifying any doubts of supplier/s. The helpline numbers are provided in the e-procurement website.

- ❖ Mr. Swapnil Hamilton, Support Executive, Ph: +91 7940270549, e-mail ID: swapnil.h@eptl.in
- ❖ Mr. Hardik Oza, Support Executive, Ph: +91 7940270560, e-mail ID: hardik.oza@eptl.in
- ❖ Mr. Ankur Bhatt, Support Executive, Ph: +91 7940270590, e-mail ID: ankur.bhatt@eptl.in
- ❖ Mr. Prashant, Asst. Manager – Implementation & Support, Ph: +91 7940270545, e-mail ID: prashant@eptl.in

Note

- i. **Offers/tenders submitted in the E-tender portal shall only be considered for further evaluation. Offers sent by FAX / E-mail / any mode other than E-tender would not be entertained.**

The Tenderers must submit their Tenders, as detailed below:

- PART-I consisting of 'PART-IA (Techno Commercial Bid)' & 'PART-IB (EMD/COST of TENDER)'
- PART-II (Price Bid)

The contents of the offer/tender are as given below. **(All Documents to be digitally signed and uploaded in E-tender Portal)**

| SN | Description | Remarks |
|-----|---|---------|
| | Part-I A | |
| i. | Covering letter/Offer forwarding letter of Tenderer (in the techno commercial compliance sheet provided) | |
| ii. | Duly filled-in 'No Deviation Certificate' as per prescribed format. Note: a. In case of any deviation, the same should be submitted separately, indicating respective clauses of tender against which deviation is taken | |

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**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 9 of 90

| SN | Description | Remarks |
|-------|---|---------------|
| | by bidder. It shall be specifically noted that deviation recorded elsewhere shall not be entertained. b. BHEL reserves the right to accept/reject the deviations without assigning any reasons, and BHEL decision is final and binding. i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL ii). In case of unacceptable deviations, BHEL reserves the right to reject the tender | |
| iii. | Supporting documents/ annexure/ schedules/ drawing etc as required in line with Pre-Qualification criteria. It shall be specifically noted that a credential certificates issued by clients shall distinctly bear the name of organization, contact phone no, FAX no, etc. | |
| iv. | All Amendments/Correspondences/Corrigenda/Clarifications/Changes/Errata etc. pertinent to this NIT. | |
| v. | Integrity Pact Agreement (Duly signed by the authorized signatory) | If applicable |
| vi. | Duly filled-in annexures, formats etc. as required under this Tender Specification/NIT | |
| vii. | Notice inviting Tender (NIT) | |
| viii. | Volume – I A : Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc | |
| ix. | Volume – I B : Special Conditions of Contract (SCC) | |
| x. | Volume – I C : General Conditions of Contract (GCC) | |
| xi. | Volume – I D : Forms & Procedures | |
| xii. | Volume - IE: Technical Specifications and Plot Plan | |
| xiii. | Volume – II (UNPRICED – without disclosing rates/price, but mentioning only 'QUOTED' or 'UNQUOTED' against each item | |
| xiv. | Any other details preferred by bidder with proper indexing. | |

| PART-I B | | |
|----------|---|--|
| i. | 1. Earnest Money Deposit (EMD) in the form as indicated in this Tender OR Documentary evidence for 'One Time EMD' with the Power Sector Region of BHEL floating the Tender 2. Cost of Tender (Demand Draft or copy of Cash Receipt as the case may be) Note: Refer Clause No-3 and 4 of NIT for further details | |

| PART-II | | |
|---------|--|--|
| ii | Volume II – PRICE BID (Duly Filled in Schedule of Rates – rate/price to be entered in words as well as figures) | |

- SPECIAL NOTE: All documents/ annexures to be submitted should be uploaded in respective places in the E-Tender portal as per the list mentioned given in this NIT. BHEL shall not be responsible for in-complete documents.**

6.0 Void

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**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 10 of 90

- 7.0 Deviation with respect to tender clauses and additional clauses/suggestions in Techno-commercial bid / Price bid shall NOT be considered by BHEL. Bidders are requested to positively comply with the same.
- 8.0 BHEL reserves the right to accept or reject any or all Offers without assigning any reasons thereof. BHEL also reserves the right to cancel the Tender wholly or partly without assigning any reason thereof. Also BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).
- 9.0 **Assessment of Capacity of Bidders:**

Bidder's capacity for executing the job under tender shall be assessed 'LOAD' wise and 'PERFORMANCE' wise as per the following:

- I. **LOAD:** Load takes into consideration **ALL** the contracts of the Bidder under execution with BHEL Regions, irrespective of whether they are similar to the tendered scope or not. The cut off month for reckoning 'Load' shall be the 3rd Month preceding the month corresponding to the 'latest date of bid submission', in the following manner -

(Note: For example, if latest bid submission is in Jan 2017, then the 'load' shall be calculated up to and inclusive of Oct 2016)

Total number of Packages in hand = Load (P)

Where 'P' is the sum of all unit wise identified packages (refer table-1) under execution with BHEL Regions as on the cut off month defined above, including packages yet to be commenced, excepting packages which are on Long Hold.

- II. **PERFORMANCE:** Here 'Monthly Performance' of the bidder for all the packages (under execution/ executed during the 'Period of Assessment' in all Power Sector Regions of BHEL) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced shall be taken into consideration. The 'Period of Assessment' shall be 6 months preceding and including the cut off month. The cut off month for reckoning 'Period of Assessment' shall be the 3rd Month preceding the month corresponding to 'latest date of bid submission', in the following manner:

(Note: For example, if 'latest date of bid submission' is in Jan 2017, then the 'performance' shall be assessed for a 6 months' period up to and inclusive of Oct 2016 (i.e. from May 2016 to Oct 2016), for all the unit wise identified packages (refer Table I))

- i). **Calculation of Overall 'Performance Rating' for 'Similar Package/Packages' for the tendered scope under execution at Power Sector Regions for the 'Period of Assessment':**

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for all the similar Package/packages', divided by the total number of Package months for which evaluation should have been done, as per procedure below:

- a) $P_1, P_2, P_3, P_4, P_5, \dots, P_N$ etc. be the packages (under execution/ executed during the 'Period of Assessment' in all Regions of BHEL) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced. Total number of similar packages for all Regions = P_T (i.e. $P_T = P_1 + P_2 + P_3 + P_4 + \dots + P_N$)
- b) Number of Months ' T_1 ' for which 'Monthly Performance Evaluation' as per relevant formats, should have been done in the 'Period of Assessment' for the corresponding similar package P_1 . Similarly T_2 for package P_2, T_3 for package P_3 , etc. for the tendered scope. Now calculate

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 11 of 90

cumulative total months ' T_T ' for total similar Packages ' P_T ' for all Regions (i.e. $T_T = T_1 + T_2 + T_3 + T_4 + \dots T_N$)

- c) Sum ' S_1 ' of 'Monthly Performance Evaluation' Scores ($S_{1-1}, S_{1-2}, S_{1-3}, S_{1-4}, S_{1-5} \dots S_{1-T1}$) for similar package P_1 , for the 'period of assessment' ' T_1 ' (i.e. $S_1 = S_{1-1} + S_{1-2} + S_{1-3} + S_{1-4} + S_{1-5} + \dots S_{1-T1}$). Similarly, S_2 for package P_2 for period T_2 , S_3 for package P_3 for period T_3 etc. for the tendered scope for all Regions. Now calculate cumulative sum ' S_T ' of 'Monthly Performance Evaluation' Scores for total similar Packages ' P_T ' for all Regions (i.e. ' $S_T = S_1 + S_2 + S_3 + S_4 + S_5 + \dots S_N$ ').
- d) **Overall Performance Rating ' R_{BHEL} ' for the Similar Package/Packages** (under execution/ executed during the 'Period of Assessment') in all the Power Sector Regions of BHEL

$$= \frac{\text{Aggregate of Performance scores for all similar packages in all the Regions}}{\text{Aggregate of months for each of the similar packages for which performance should have been evaluated in all the Regions}}$$

$$= \frac{S_T}{T_T}$$

- e) **Bidders to note that the risk of non-evaluation or non-availability of the 'Monthly Performance Evaluation' reports as per relevant formats is to be borne by the Bidder.**

f) **Table showing methodology for calculating 'a', 'b' and 'c' above**

| Sl. No. | Item Description | Details for all Regions | | | | | | | Total |
|---------|---|-------------------------|-------|-------|-------|-------|--------|-------|---|
| | | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) | |
| 1 | Similar Packages for all Regions → (under execution/ executed during period of assessment) | P_1 | P_2 | P_3 | P_4 | P_5 | ... | P_N | Total No. of similar packages for all Regions = P_T i.e. Sum (Σ) of columns (iii) to (ix) |

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 12 of 90

| Sl. No. | Item Description | Details for all Regions | | | | | | | Total |
|---------|---|--|--|--|--|--|---------------------------------------|--|--|
| | | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) | |
| (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) | (x) |
| 2 | Number of Months for which 'Monthly Performance Evaluation' as per relevant formats should have been done in the 'period of assessment' for corresponding Similar Packages (as in row 1) | T ₁ | T ₂ | T ₃ | T ₄ | T ₅ | ... | T _N | Sum (Σ) of columns (iii) to (ix) = T _T |
| 3 | Monthly performance scores for the corresponding period (as in Row 2) | S ₁₋₁ , S ₁₋₂ , S ₁₋₃ , S ₁₋₄ , ... S _{1-T1} | S ₂₋₁ , S ₂₋₂ , S ₂₋₃ , S ₂₋₄ , ... S _{2-T2} | S ₃₋₁ , S ₃₋₂ , S ₃₋₃ , S ₃₋₄ , ... S _{3-T3} | S ₄₋₁ , S ₄₋₂ , S ₄₋₃ , S ₄₋₄ , ... S _{4-T4} | S ₅₋₁ , S ₅₋₂ , S ₅₋₃ , S ₅₋₄ , ... S _{5-T5} | | S _{N-1} , S _{N-2} , S _{N-3} , S _{N-4} , ... S _{N-TN} | ----- |
| 4 | Sum of Monthly Performance scores of the corresponding Package for the corresponding period (as in row-3) | S ₁ | S ₂ | S ₃ | S ₄ | S ₅ | ... | S _N | Sum (Σ) of columns (iii) to (ix) = S _T |

ii). Calculation of Overall 'Performance Rating' (R_{BHEL}) in case at least 6 evaluation scores for 'similar Package/Packages' for the tendered scope ARE NOT AVAILABLE, during the 'Period of Assessment':

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for ALL the packages, divided by the total number of Package months for which evaluation should have been done. 'R_{BHEL}' shall be calculated subject to availability of 'performance scores' for at least 6 'package months' in the order of precedence below:

- a) 'Period of Assessment' i.e. 6 months preceding and including the cut-off month
- b) 12 months preceding and including the cut-off month
- c) 24 months preceding and including the cut-off month
- d) 36 months preceding and including the cut-off month

In case, R_{BHEL} cannot be calculated as above, then Bidder shall be treated as 'NEW VENDOR'. Further eligibility and qualification of this bidder shall be as per definition of 'NEW VENDOR' described in 'Explanatory Notes'.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 13 of 90

iii). Factor “L” assigned based on Overall Performance Rating (R_{BHEL}) at Power Sector Regions:

| Sl. no. | Overall Performance Rating (R_{BHEL}) | Corresponding value of ‘L’ |
|---------|---|----------------------------|
| 1 | =60 | NA |
| 2 | > 60 and ≤ 65 | 0.4 |
| 3 | > 65 and ≤ 70 | 0.35 |
| 4 | > 70 and ≤ 75 | 0.25 |
| 5 | > 75 and < 80 | 0.2 |
| 6 | ≥ 80 | NA |

III. ‘Assessment of Capacity of Bidder’:

‘Assessment of Capacity of Bidder’ is based on the Maximum number of packages for which a vendor is eligible, considering the performance scores of similar packages, as below:

Max number of packages $P_{Max} = (R_{BHEL} - 60)$ divided by corresponding value of ‘L’, i.e. $(R_{BHEL} - 60)/L$

Note:

- i). In case the value of P_{Max} results in a fraction, the value of P_{Max} is to be rounded off to next whole number
- ii). For $R_{BHEL} = 60$, $P_{Max} = '1'$
- iii). For $R_{BHEL} \geq 80$, there will be no upper limit on P_{Max}

The Bidder shall be considered ‘Qualified’ as per ‘Assessment of Capacity of Bidder’ for the subject Tender if $P \leq P_{Max}$
(Where P is calculated as per clause ‘I’ above)

IV. Explanatory note:

- i). Similar package means Boiler or ESP or Piping or Turbine or Civil or Structure or Electrical or C&I etc. at the individual level irrespective of rating of Plant and irrespective of whether the subject tender is a single package or as part of combined/composite packages. Normally Boiler, ESP, Piping, Turbine, Electrical, C&I, Civil, Structure etc. is considered individual level of package. For example, in case the tendered scope is a Boiler Vertical Package comprising of Boiler, ESP and Power Cycle Piping (i.e. the ‘identified packages as per Table-1 below), the ‘PERFORMANCE’ part against sl.no. II above, needs to be evaluated considering all the identified packages (i.e. Boiler, ESP and Power Cycle Piping) and finally the Bidder’s capacity to execute the tendered scope is assessed in line with III above.
- ii). Identified Packages (Unit wise)

Table-1

| Civil | Electrical and C&I | Mechanical |
|--|-------------------------------|--|
| i). Enabling works | i). Electrical | i). Boiler & Aux (All types including CW Piping if applicable) |
| ii). Pile and Pile Caps | ii). C&I | ii). Power Cycle Piping/Critical Piping |
| iii). Civil Works including foundations | iii). Others (Elect. and C&I) | iii). ESP |
| iv). Structural Steel Fabrication & Erection | | iv). LP Piping |
| v). Chimney | | v). Steam Turbine Generator set & Aux |
| vi). Cooling Tower | | vi). Gas Turbine Generator set & Aux |
| vii). Others (Civil) | | vii). Hydro Turbine Generator set & Aux |
| | | viii). Turbo Blower (including Steam Turbine) |
| | | ix). Material Management |

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 14 of 90

x). Others (Mechanical)

iii). Bidders who have not been evaluated for at least **six package** months in the last 36 months preceding and including the Cut-off month in the online BHEL system for contractor performance evaluation in BHEL PS Regions, shall be considered “NEW VENDOR”.

A ‘NEW VENDOR’ shall be considered qualified subject to satisfying all other tender conditions.

A ‘NEW VENDOR’ if awarded a job (of package/packages identified under this clause) shall be tagged as “FIRST TIMER” on the date of first LOI from BHEL.

The “FIRST TIMER” tag shall remain till completion of all the contracts against which vendor has been tagged as First Timer or availability of 6 evaluation scores within last 36 months preceding and including the Cut-off month in the online BHEL system for contractor performance evaluation in BHEL PS Regions.

A Bidder shall not be eligible for the next job as long as the Bidder is tagged as “FIRST TIMER” excepting for the Tenders which have been opened on or before the date of the bidder being tagged as ‘FIRST TIMER’.

After removal of ‘FIRST TIMER’ tag, the Bidder shall be considered ‘QUALIFIED’ for the future tenders subject to satisfying all other tender conditions including ‘Assessment of Capacity of Bidders’.

iv). Consequent upon applying the criteria of ‘Assessment of Capacity of Bidders’ detailed above on all the bidders qualified against Technical and Financial Qualification criteria, if the number of qualified bidders reduces to less than four, then for further processing of the Tender, BHEL at its discretion reserves the right to also consider the bidders who are “not qualified” as per criteria of ‘Assessment of Capacity of Bidders’ and for this, procedure described in following three options shall be followed:

- a) All the bidders having Overall Performance Rating (‘RBHEL’) ≥ 60 shall be considered qualified against criteria of ‘Assessment of Capacity of Bidders’.
- b) If even after using option “a”, the number of qualified bidders remains less than four, then in addition to bidders considered as per option “a”, “First timer” bidders having average of available performance scores ≥ 60 upto and including the Cut Off month shall also be considered qualified against criteria of ‘Assessment of Capacity of Bidders’.
- c) If even after using option “a” and “b”, the number of qualified bidders remains less than four, then in addition to bidders considered as per option “a” and “b”, “First timer” bidders for whom no performance score is available in the system upto and including the Cut Off month, shall also be considered qualified against criteria of ‘Assessment of Capacity of Bidders’.

Note:- In case, the number of bidders qualified against Technical and Financial Qualification criteria itself is less than four, then all bidders (a)- having Overall Performance Rating (‘RBHEL’) ≥ 60 , (b)- First timer” bidders having average of available performance scores ≥ 60 upto and including the Cut Off month, (c)- “First timer” bidders for whom no performance score is available in the system upto and including the Cut Off month, shall be considered qualified against criteria of ‘Assessment of Capacity of Bidders’ for further processing of tender.!

- v). ‘Under execution’ shall mean works in progress as per the following:
- a. Up to execution of 90% of anticipated Contract Value in case of Civil, MM, Structural and Turbo Blower Packages
 - b. Up to Steam Blowing in case of Boiler/ESP/Piping Packages

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 15 of 90

c. Up to Synchronization in all Balance Packages

Note: BHEL at its discretion can extend (or reduce in exceptional cases in line with Contract conditions) the period defined against (a), (b) and (c) above, depending upon the balance scope of work to be completed.

- vi). Contractor shall provide the latest contact details i.e. mail-ID and Correspondence Address to SCT Department, so that same can be entered in the Contractor Performance Evaluation System, and in case of any change/discrepancy same shall be informed immediately. Login Details for viewing scores in Contractor Performance Evaluation System shall be provided to the Contractor by SCT Department.
 - vii). Performance Evaluation for Activity Month shall be completed in Evaluation Month (i.e. month next to Activity Month) or in rare cases in Post Evaluation Month (i.e. month next to Evaluation Month) after approval from Competent Authority. In case scores are not acceptable, Contractor can submit Review Request to GM Site/ GM Project latest by 25th of Evaluation Month or 3 days after approval of score, whichever is later. However, acceptance/rejection of 'Review Request' solely depends on the discretion of GM Site/GM Project. After acceptance of Review Request, evaluation score shall be reviewed at site and the score after completion of review process shall be acceptable and binding on the contractor.
 - viii). Project on Hold due to reasons not attributable to bidder -
 - a. **Short hold:** Evaluation shall not be applicable for this period, however Loading will be considered.
 - b. **Long hold:** Short hold for continuous six months and beyond or hold on account of Force Majeure shall be considered as Long Hold. Evaluation as well as Loading shall not be considered for this period.
 - ix). Performance evaluation in CL 9 above is applicable to prime bidder and Consortium partner (or Technical tie up partner) for their respective scope of work.
- 10.0 Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation, applicable wage structure, wage rules, etc before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions.
- 11.0 For any clarification on the tender document, the bidder may seek the same in writing or through e-mail or **through E-tender Portal**, as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay or any other delays. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.
- 12.0 BHEL may decide holding of pre-bid discussion [PBD] with all intending bidders as per date indicated in the NIT. The bidder shall ensure participation for the same at the appointed time, date and place as may be decided by BHEL. Bidders shall plan their visit accordingly. The outcome of pre-bid discussion (PBD) shall also form part of tender.
- 13.0 In the event of any conflict between requirement of any clause of this specification/ documents/drawings/data sheets etc or requirements of different codes/standards specified, the same to be brought to the knowledge of BHEL in writing for clarification before due date of seeking clarification (whichever is applicable), otherwise, interpretation by BHEL shall prevail. Any typing error/missing

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 16 of 90

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pages/ other clerical errors in the tender documents, noticed must be pointed out before pre-bid meeting/submission of offer; else BHEL's interpretation shall prevail.

- 14.0 Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
- 15.0 Bidders shall submit Integrity Pact Agreement (Duly **Digitally** signed by authorized signatory who signs in the offer), **if applicable**, along with techno-commercial bid. This pact shall be considered as a preliminary qualification for further participation. **The names and other details of Independent External Monitor (IEM) for the subject tender is as given at point (1) above.**
- 16.0 The Bidder has to satisfy the Pre-Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of satisfying the Pre-Qualification Criteria specified in this NIT as per Annexure-I (as applicable), past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD.
- ~~17.0 In case BHEL decides on a 'Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorized representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders.~~
- 18.0 Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise.
- 19.0 BHEL reserves the right to decide the successful bidder on the basis of Reverse Auction process. In such case all qualified bidders will be intimated regarding procedure/ modality for Reverse Auction process prior to Reverse Auction and price will be decided as per the rules for Reverse Auction. .

However, if reverse auction process is unsuccessful as defined in the RA rules/procedures, or for whatsoever reason, then the sealed 'PRICE BIDS' will be opened for deciding the successful bidder. BHEL's decision in this regard will be final and binding on bidder.
- 20.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
- 21.0 In case the bidder is an "Indian Agent of Foreign Principals", 'Agency agreement has to be submitted along with Bid, detailing the role of the agent along with the terms of payment for agency commission in INR, along with supporting documents. For the tenders requiring services of Original supplier of equipment/services, offer is preferred from the OEM/Principal. However, if the OEM/Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer/supplier in the same tender. Moreover, either the agent could bid on behalf of manufacturer / supplier or manufacturer / supplier could bid directly but not both. In case bids are received from both manufacturer / supplier and the agent, bid from agent shall be ignored.
- 22.0 The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.
- 23.0 Consortium Bidding (or Technical Tie up) shall be allowed only if specified in Pre-Qualifying Requirement (PQR) criteria, and in such a case the following shall be complied with:

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 17 of 90

- 23.1 Prime Bidder and Consortium Partner or partners are required to enter into a consortium agreement with a validity period of six months initially. In case the consortium is awarded the contract, then the Consortium Agreement between the Prime Bidder and Consortium Partner or partners shall be extended till contractual completion period including extension periods if any applicable.
- 23.2 'Standalone' bidder cannot become a **Prime Bidder' or a 'Consortium bidder' or 'Technical Tie up bidder' in a consortium (or Technical Tie up) bidding**. Prime bidder shall neither be a consortium partner to other prime bidder nor take any other consortium partners. However, consortium partner may enter into consortium agreement with other prime bidders. In case of non-compliance, consortium bids of such Prime bidders will be rejected.
- 23.3 Number of partners for a consortium Bidding (or Technical Tie up) shall be as specified in the PQR.
- 23.4 Prime Bidder shall be as specified in the Pre-Qualification Requirement, else the bidder who has the major share of work.
- 23.5 In order to be qualified for the tender, Prime Bidder and Consortium partner or partners shall satisfy (i) the Technical 'Pre Qualifying Requirements' specified for the respective package, (ii) "Assessment of Capacity of Bidder" as specified in clause 9.0.
- 23.6 Prime Bidder shall comply with additional "Technical" criteria of PQR as defined in 'Explanatory Notes for the PQR'.
- 23.7 Prime Bidder shall comply with all other Pre Qualifying criteria for the Tender unless otherwise specified.
- 23.8 In case customer approval is required, then Prime Bidder and Consortium Partner or partners shall have to be individually approved by Customer for being considered for the tender.
- 23.9 Prime Bidder shall be responsible for the overall execution of the contract.
- 23.10 In case of award of job, Performance shall be evaluated for Prime Bidder and Consortium Partner or partners for their respective scope of work(s) as per prescribed formats.
- 23.11 In case the Consortium partner or partners back out, their SDs shall be encashed by BHEL. In such a case, other consortium partner or partners meeting the PQR have to be engaged by the Prime Bidder, and if not, the respective work will be withdrawn and executed on risk and cost basis of the Prime Bidder. The new consortium partner or partners shall submit fresh SDs as applicable.
- 23.12 In case the prime Bidder withdraws, the whole contract shall be considered cancelled and short closed.
- 23.13 After execution of work, the work experience shall be assigned to the Prime Bidder and the consortium partner or partners for their respective scope of work. After successful execution of two similar works with the same consortium partner or partners under direct orders of BHEL, the Prime Bidder shall be eligible for becoming a 'standalone' bidder for similar works, subject to certification from BHEL about the active involvement of the Prime Bidder for satisfactory execution of the works.
- 23.14 The consortium partner shall submit SD equivalent to 2% of the total contract value in addition to the SD to be submitted by the prime Bidder for the total contract value. In case there are two consortium partners, then each partner shall submit SD equivalent to 1% of the total contract value

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 18 of 90

in addition to the SD to be submitted by the prime Bidder for the total contract value. The 100% SD value to be submitted by the consortium partner/(s) shall be remitted before start of work. All the terms & conditions of the SD clause in Vol-IC GCC shall be applicable for this SD except clauses no 1.10.1, 1.10.4 & 1.10.6 of Vol-IC GCC. For “**modes of deposit**” of this SD, clause no 1.10.3 of Vol-IC GCC shall be applicable.

23.15 In case of a Technical Tie up, all the clauses applicable for the Consortium partner shall be applicable for the Technical Tie up partner also.

24.0 The bidder shall submit/upload documents in support of possession of ‘Qualifying Requirements’ duly self-certified and stamped by the authorized signatory (**through Digital Signature**), as per the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately.

25.0 The bidder may have to produce original document for verification if so decided by BHEL.

26.0 Order of Precedence

In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:

- a. Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL
- b. Notice Inviting Tender (NIT)
- c. Price Bid-Volume-II
- d. Technical Conditions of Contract (TCC)—Volume-1A
- e. Special Conditions of Contract (SCC) —Volume-1B
- f. General Conditions of Contract (GCC) —Volume-1C
- g. Forms and Procedures —Volume-1D

It may please be noted that guidelines/rules in respect of suspension of business dealings’, ‘Vendor evaluation format’, ‘Quality, Safety & HSE guidelines’, etc may undergo change from time to time and the latest one shall be followed.

For BHARAT HEAVY ELECTRICALS LTD

(Addl. General Manager - Purchase)

Enclosure

01. Annexure-1: Pre Qualifying criteria.
02. Annexure-2: Check List.
03. Annexure-3: Integrity Pact
04. Annexure-4: Important Information.
- ~~05. Annexure-5: MSE Annex.~~
06. Annexure-6: Declaration for Reverse Auction.

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 19 of 90

ANNEXURE - 1

PRE QUALIFYING CRITERIA

| | |
|---|--|
| E-Tender Specification Number: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004 | |
| JOB | PART-A: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS FOR MAIN PLANT AREA AND BOPS INCLUDING FGD, SCR & OTHER RELATED TO MOEF NORMS AND PART-B: CONSTRUCTION OF 275M HEIGHT RCC SINGLE FLUE CHIMNEY WITH BOROSILICATE GLASS BLOCK LINING ON INNER SURFACE OF STEEL FLUE CAN INCLUDING SUPPLYING AND INSTALLATION OF ELECTRICAL ITEMS AT 1X660 MW BHUSAWAL TPS, MAHARASHTRA. |

| S No | PRE QUALIFICATION CRITERIA | Bidders claim in respect of fulfilling the PQR Criteria | |
|----------|--|---|--|
| | | Applicability | |
| A | Submission of Integrity Pact duly signed (if applicable) (Note: To be submitted by Prime Bidder & Consortium /Technical Tie up partner jointly in case Consortium bidding is permitted, otherwise by the sole bidder) | APPLICABLE | |
| B | <p><u>TECHNICAL PQR:</u> Bidder shall essentially meet all the Qualifying Requirements (i.e. B.1, B.2, B.3, B.4, B.5 & B.6) as under, in the last seven years as on latest date of bid submission:</p> <p>B.1: Bidder should have Executed “Piling or Civil or Structure or ‘Civil and Structural Works’ or RCC Chimney or RCC Cooling Tower or RCC Silo or Mill Bunker or any combination of these” for any one of the following in the last seven years from latest date of bid submission:</p> <p>B.1.1) Executed One work of value not less than Rs 19400 Lakhs against single work order.</p> <p align="center"><u>OR</u></p> <p>B.1.2) Executed Two works each of value not less than Rs 12125 Lakhs against maximum two work orders.</p> <p align="center"><u>OR</u></p> <p>B.1.3) Executed Three works each of value not less than Rs 9700 Lakhs against maximum three work orders.</p> <p align="center"><u>AND</u></p> <p><u>B.2:</u> Bidder Should have executed any one of the following:</p> <p>B.2.1 Bidder should have executed Reinforced Cement Concrete (RCC) quantities of at least 22332 Cum within a common period of twelve consecutive months in cumulative of two running/completed contracts.</p> <p align="center"><u>OR</u></p> <p>B.2.2: Bidder should have executed Reinforced Cement Concrete (RCC) quantities of at least 14888 Cum within a period of twelve consecutive months against one running/ completed contact.</p> <p align="center"><u>AND</u></p> | APPLICABLE | |

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Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 20 of 90

| S No | PRE QUALIFICATION CRITERIA | Bidders claim in respect of fulfilling the PQR Criteria | |
|------|--|---|--|
| | | Applicability | |
| | <p>B.3: Bidder should have executed any one of the following:</p> <p>B.3.1: Bidder should have executed one STG Deck of minimum 190MW rating power plant.</p> <p align="center">OR</p> <p>B.3.2: Bidder should have executed at least one dynamic equipment/machine cast-in situ foundation including deck at minimum height of “4 mtr or more” above the finished floor level having at least “400 Cum RCC in Deck” against one/ two work orders.</p> <p align="center">AND</p> <p>B.4: Bidder should have executed any one of the following for Structural works:</p> <p>B.4.1: At least 2452 MT of Structure Fabrication works, within a common period of twelve consecutive months in cumulative of two running/completed contracts.</p> <p align="center">AND</p> <p>At least 2452 MT of Structure Erection works, within a common period of twelve consecutive months in cumulative of two running/completed contracts.</p> <p align="center">OR</p> <p>B.4.2: At least 1635 MT of Structure Fabrication works, within a period of twelve consecutive months in one running/completed contract.</p> <p align="center">AND</p> <p>At least 1635 MT of Structure Erection works, within a period of twelve consecutive months in one running/completed contract.</p> <p align="center">AND</p> <p>B.5: Bidder should have executed any one of the following for Structural works:</p> <p>B.5.1: Executed fabrication and erection of Mill Bunker Structure for at least one unit of minimum capacity of 190MW.</p> <p align="center">OR</p> <p>B.5.2: Executed Mill Bunker Structure Work for any one of the following (Either B.5.2.1 or B.5.2.2):</p> <p>B.5.2.1: At least 360 MT for Structure Fabrication work, within a period of twelve consecutive months in cumulative of two concurrently running/ completed contracts.</p> <p align="center">AND</p> <p>At least 360 MT for Structure Erection work, within a period of twelve consecutive months in cumulative of two concurrently running/ completed contracts.</p> <p align="center">OR</p> | | |

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 21 of 90

| S No | PRE QUALIFICATION CRITERIA | Bidders claim in respect of fulfilling the PQR Criteria | |
|------------|--|---|--|
| | | Applicability | |
| | <p>B.5.2.2: At least 240 MT for Structure Fabrication work, within a period of twelve consecutive months in one running/ completed contracts.</p> <p align="center">AND</p> <p>At least 240 MT for Structure Erection work, within a period of twelve consecutive months in one running/ completed contracts.</p> <p align="center">AND</p> <p>B.6: Bidder should have executed either “Shell of one RCC Chimney of atleast 165 Mtr” OR “Shell of one NDCT (Natural Draft Cooling Tower) of atleast 110 Mtr”.</p> <p>Note: Bidder should satisfy PQR B.1, B.2, B.3, B.4, B.5 and B.6 as a <u>standalone bidder</u>. In case a bidder does not satisfy <u>PQR B.3, B.4, B.5 & B.6</u> above, then the bidder can form consortium with one/two party/(ies) who satisfies the PQR B.3, B.4, B.5, B.6 above. This will be termed as “Consortium Bidding”. In case of consortium bidding, following shall be applicable:</p> <ul style="list-style-type: none"> • Prime bidder should satisfy PQR B.1 and B.2 above. • Agency satisfying PQR B.3, B.4, B.5 & B.6 shall be termed as “Consortium Partner/(s)”. • Prime bidder shall be responsible for satisfying the financial PQR-C (i.e. C-1, C-2, C-3 & C.4). • Prime bidder shall submit the entire tender along with the credentials, all statutory documents and the documents in support of PQR condition of the Consortium Partner. <p><u>All conditions as in Clause 23 of NIT shall also be applicable for consortium bidding.</u></p> | | |
| C-1 | <p><u>Financial TURNOVER</u> Bidders must have achieved an average annual financial turnover (audited) of Rs. 7275.00 Lakhs or more over last three Financial Years (FY) i.e. 2015-16, 2016-17 & 2017-18.</p> | APPLICABLE | |
| C-2 | <p><u>NETWORTH</u> (only in case of Companies) Net worth of the Bidder based on the latest Audited Accounts as furnished for ‘C-1’ above should be positive.</p> | APPLICABLE | |
| C-3 | <p><u>PROFIT</u> Bidder must have earned profit in any one of the three Financial Years as applicable in the last three Financial Years as furnished for ‘C-1’ above.</p> | APPLICABLE | |
| C-4 | <p>Bidder must not be under Bankruptcy Code Proceedings (IBC) by NCLT or under Liquidation / BIFR, which will render him ineligible for participation in this tender, and shall submit undertaking to this effect.</p> | APPLICABLE | |

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 22 of 90

| S No | PRE QUALIFICATION CRITERIA | Bidders claim in respect of fulfilling the PQR Criteria | |
|----------|---|---|----------------|
| | | Applicability | |
| D | Assessment of Capacity of Bidder to execute the work as per sl no 9 of NIT (if applicable) The "Assessment of Capacity of Bidders" for this Tender shall be carried out by considering the identified similar package. | APPLICABLE | BY BHEL |
| E | Approval of Customer (if applicable) Note: Names of bidders (including consortium/Technical Tie up partners in case consortium bidding is permitted) who stand qualified after compliance of criteria A to D shall be forwarded to customer for their approval | APPLICABLE | BY BHEL |
| F | Price Bid Opening Note: Price Bids of only those bidders shall be opened who stand qualified after compliance of criteria A to E | | BY BHEL |
| G | Consortium tie-ups | APPLICABLE | |

Explanatory Notes for the PQR (unless otherwise specified in the PQR):

Explanatory Notes for PQR B.1 (Technical)

- For the criteria (B.1), actual executed value shall be considered.
- Value of work is to be updated with indices for "All India Avg. Consumer Price index for industrial workers" and "Monthly Whole Sale Price Index for All Commodities" with base month as per last month of work execution and indexed up to three (3) months prior to the month of latest due date of bid submission as per following formula-

$$P = R + \left\{ \frac{0.425 \times R \times (X_N - X_0)}{X_0} \right\} + \left\{ \frac{0.425 \times R \times (Y_N - Y_0)}{Y_0} \right\}$$

Where

P = Updated value of work

R = Value of executed work

X_N = All India Avg. Consumer Price index for industrial workers for three months prior to the month of latest due date of bid submission (e.g. If latest bid submission date is 02-Mar-17, then bid submission month shall be reckoned as March'17 and index for Dec'16 shall be considered).

X₀ = All India Avg. Consumer Price index for industrial workers for last month of work execution.

Y_N = Monthly Whole Sale Price Index for All Commodities for the month, three months prior to the month of latest due date of bid submission (e.g. If latest bid submission date is 02-Mar-17, then bid submission month shall be reckoned as March'17 and index for Dec'16 shall be considered).

Y₀ = Monthly Whole Sale Price Index for All Commodities for last month of work execution.

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 23 of 90

| S No | PRE QUALIFICATION CRITERIA | Bidders claim in respect of fulfilling the PQR Criteria | |
|--|----------------------------|---|--|
| | | Applicability | |
| <u>Explanatory Notes for PQR B.2 (Technical):</u> | | | |
| <p>3. Unless otherwise specified, for the purpose of “B.2, B.3, B.4, B.5 & B.6 Technical Criteria”, the word 'EXECUTED' means achievement of milestones as defined below –</p> <ol style="list-style-type: none"> a) "ACHIEVEMENT OF PHYSICAL QUANTITIES" as per PQRs. b) "READINESS FOR COAL FILLING" in respect of Mill Bunker. c) "CHARGING" in respect of Power Transformers / Bus Ducts / "HT/LT Switchgears" / "HT / LT Cabling". d) For C&I works: "SYNCHRONISATION" in case of power project and "WORK COMPLETION of the value as defined in PQR" in case of industry. e) "BOILER LIGHT UP" in respect of Boiler / CFBC / ESP. f) "GAS IN" in respect of HRSG. g) "STEAM BLOWING COMPLETION" in respect of Power Cycle Piping. h) "HYDRAULIC TEST" of the system in respect of Pressure parts / LP Piping / CW Piping. i) "FULL LOAD OPERATION OF THE UNIT" in respect of Insulation work. j) "SYNCHRONISATION" in respect of STG / GTG. k) "SPINNING" in respect of HTG. l) "COMPLETION AND HANDING OVER FOR MECHANICAL ERECTION" in respect of STG Deck and Machine/Equipment foundation. <ol style="list-style-type: none"> 4. Boiler means HRSG or WHRB or any other types of Steam Generator. 5. Power Cycle piping means Main Steam, Hot Reheat, Cold Reheat, HP Bypass. 6. For the purpose of evaluation of the PQR, one MW shall be considered equivalent to 3.5 TPH where ever rating of HRSG/BOILER is mentioned in MW. Similarly, wherever rating of Gas Turbine is mentioned in terms of Frame size, ISO rating of the same in terms of MW shall be considered for evaluation. 7. Scope for Capital overhaul of STG shall cover Bearing Inspection work and overhauling of all cylinders of the Turbine. 8. In case the tendered scope is not a Pulverized Fuel Boiler, experience of Oil/Gas Fired Boilers can also be considered. 9. In case of lower rated units in Cogen, Combined Cycle of Industrial projects (especially Refinery projects), the packaging philosophy should be a composite package consisting of GTGs/STGs/Boilers etc. for tendering purpose with a PQR of a 500 MW Boiler with consortium provision for STG. | | | |
| <u>Explanatory Notes for PQR -C (Financial):</u> | | | |
| <ol style="list-style-type: none"> 10. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated against C-1 above. 11. In case audited financial statements have not been submitted for all the three years as indicated against C-1 above, then the applicable audited statements submitted by the bidders against the requisite three years, will be averaged for three years. 12. If financial statements are not required to be audited statutorily, then instead of audited financial statements, financial statements are required to be certified by Chartered Accountant. 13. C-2: -NETWORTH: Shall be calculated based on the latest Audited Accounts as furnished for C-1 above. Net worth = Paid up share capital* + Reserves. (*: Share Capital OR Partnership Capital OR Proprietor Capital as the case may be) 14. C-3: Bidder must have earned profit in any one of the three financial years as applicable in the last three financial years as furnished for 'C-1' above. | | | |

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 24 of 90

| S No | PRE QUALIFICATION CRITERIA | Bidders claim in respect of fulfilling the PQR Criteria |
|------|--|---|
| | | Applicability |
| | <p>Note: PROFIT shall be PBT earned during any one year of last three financial years as in 'C-1' above.</p> <p><u>Common Explanatory Notes:</u></p> <ol style="list-style-type: none"> 1. For evaluation of PQR, the credentials of the Bidder alone, and not that of the Group Company shall be considered. 2. Completion date for achievement of the technical criteria specified in the Common QR should be in the last 7 years ending on the 'latest date of Bid Submission' of Tender irrespective of date of the start of work. 3. "Executed" means the bidder should have achieved the criteria specified in the Common QR even if the Contract has not been completed or closed. 4. In case the Experience/PO/WO certificate enclosed by bidders do not have separate break up of prices for the E&C portion for Electrical and C&I works (i.e. the certificates enclosed are for composite order for supply and erection of Electrical and C&I and other works if any), then value of Erection & Commissioning for the Electrical and C&I portion shall be considered as 15% of the price for supply & erection of Electrical and C&I. 5. Following shall be complied with in case of consortium: <ol style="list-style-type: none"> a. The Prime Bidder and Consortium Partner(s) are required to enter in to a consortium agreement with a validity period of "six months" initially. Thereafter, the Prime Bidder and Consortium Partner(s) shall certify to BHEL regarding existence and validity of their consortium agreement on six monthly basis. b. Prime Bidder and Consortium partners shall be approved by Customer for being considered for the tender (applicable if customer approval is required). c. Number of partners including prime Bidder shall be NOT more than 3 (Three). d. Prime Bidder alone shall necessarily comply with "B.1 Technical Criteria" except for mechanical package where B1 criteria is not applicable. e. Prime Bidder and Consortium Partner shall together comply with the 'Pre-Qualification Requirements' specified for the respective category of technical requirement as per "technical criteria". f. Prime Bidder shall comply with all other Pre Qualifying criteria for the Tender unless otherwise specified. g. All other conditions shall be read in conjunction with clause no 23.0 of NIT. h. Prime Bidder shall be the Bidder who has a major share of work. i. Prime Bidder shall be responsible for the overall execution of the Contract. j. Performance shall be evaluated for Prime Bidder and the Consortium partner for their respective scope of work. k. In case the Consortium partner backs out, another consortium partner meeting the QRs, has to be engaged by Prime Bidder and if not, the respective work will be withdrawn and executed on risk and cost basis of the prime bidder. l. In case Prime Bidder withdraws, the whole contract shall be considered cancelled and short closed. m. After successful execution of one work with a consortium partner under direct orders of BHEL, the Prime Bidder shall be eligible for becoming a 'standalone' bidder for works similar to that for which consortium partner was engaged, for subsequent tenders. n. The Consortium partner shall submit SD equivalent to 1% of the total contract value in addition to the SD to be submitted by the Prime Bidder for the total contract value. | |

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 25 of 90

.....
BIDDER SHALL SUBMIT CREDENTIALS (DETAILED WORK ORDER, BOQ, ONGOING/COMPLETION CERTIFICATE, **TDS CERTIFICATES AND FINANCIAL DOCUMENTS ETC) BASED ON WHICH BIDDER IS CLAIMING TO SATISFY THE PQ CRITERIAS.**

Note:

1. Credentials submitted by the bidder against "PRE QUALIFYING CRITERIAS" shall be verified for its authenticity. In case, any credential (s) is/are found unauthentic, offer of the bidder is liable to the rejection. BHEL reserves the right to initiate any further action as per its internal guidelines.

2. Void.

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/NTPRT-CVL CHIMNEY-U-03/2096

Page 26 of 90

| Bidder's Response against BHEL TECHNICAL PQR (WHICHEVER IS APPLICABLE) | | | | |
|---|--|---|---|------------------------|
| PQR No | Pre-Qualifying Requirement | Ref of Detailed Work Order, Name of the Work based on which bidder is claiming PQR | Ref of Completion Certificate and TDS Certificates based on which bidder is claiming PQR | Remarks, if Any |
| B | Bidder shall essentially meet all the Qualifying Requirements (i.e. B.1, B.2, B.3, B.4, B.5 & B.6) as under, in the last seven years as on latest date of bid submission: | | | |
| B.1 | <p>B.1: Bidder should have Executed "Piling or Civil or Structure or 'Civil and Structural Works' or RCC Chimney or RCC Cooling Tower or RCC Silo or Mill Bunker or any combination of these" for any one of the following in the last seven years from latest date of bid submission:</p> <p>B.1.1) Executed One work of value not less than Rs 19400 Lakhs against single work order.</p> <p align="center">OR</p> <p>B.1.2) Executed Two works each of value not less than Rs 12125 Lakhs against maximum two work orders.</p> <p align="center">OR</p> <p>B.1.3) Executed Three works each of value not less than Rs 9700 Lakhs against maximum three work orders.</p> | | | |
| B.2 | <p>B.2: Bidder Should have executed any one of the following:</p> <p>B.2.1 Bidder should have executed Reinforced Cement Concrete (RCC) quantities of at least 22332 Cum within a common period of twelve consecutive months in cumulative of two running/completed contracts.</p> <p align="center">OR</p> <p>B.2.2: Bidder should have executed Reinforced Cement Concrete (RCC) quantities of at least 14888 Cum within a period of twelve consecutive months against one running/completed contact</p> | | | |

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 27 of 90

| Bidder's Response against BHEL TECHNICAL PQR (WHICHEVER IS APPLICABLE) | | | | |
|---|---|---|---|------------------------|
| PQR No | Pre-Qualifying Requirement | Ref of Detailed Work Order, Name of the Work based on which bidder is claiming PQR | Ref of Completion Certificate and TDS Certificates based on which bidder is claiming PQR | Remarks, if Any |
| B.3 | <p>B.3: Bidder should have executed any one of the following:</p> <p>B.3.1: Bidder should have executed one STG Deck of minimum 190MW rating power plant.</p> <p align="center">OR</p> <p>B.3.2: Bidder should have executed at least one dynamic equipment/machine cast-in situ foundation including deck at minimum height of "<u>4 mtr or more</u>" above the finished floor level having at least "<u>400 Cum RCC in Deck</u>" against one/ two work orders.</p> | | | |
| B.4 | <p>B.4: Bidder should have executed any one of the following for Structural works:</p> <p>B.4.1: At least 2452 MT of Structure Fabrication works, within a common period of twelve consecutive months in cumulative of two running/completed contracts.</p> <p align="center">AND</p> <p>At least 2452 MT of Structure Erection works, within a common period of twelve consecutive months in cumulative of two running/completed contracts.</p> <p align="center">OR</p> <p>B.4.2: At least 1635 MT of Structure Fabrication works, within a period of twelve consecutive months in one running/completed contract.</p> <p align="center">AND</p> <p>At least 1635 MT of Structure Erection works, within a period of twelve consecutive months in one running/completed contract.</p> | | | |
| B.5 | <p>B.5: Bidder should have executed any one of the following for Structural works:</p> <p>B.5.1: Executed fabrication and erection of Mill Bunker Structure for at</p> | | | |

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 28 of 90

| Bidder's Response against BHEL TECHNICAL PQR (WHICHEVER IS APPLICABLE) | | | | |
|---|--|---|---|------------------------|
| PQR No | Pre-Qualifying Requirement | Ref of Detailed Work Order, Name of the Work based on which bidder is claiming PQR | Ref of Completion Certificate and TDS Certificates based on which bidder is claiming PQR | Remarks, if Any |
| | <p>least one unit of minimum capacity of 190MW.</p> <p align="center"><u>OR</u></p> <p>B.5.2: Executed Mill Bunker Structure Work for any one of the following (Either B.5.2.1 or B.5.2.2):</p> <p>B.5.2.1: At least 360 MT for Structure Fabrication work, within a period of twelve consecutive months in cumulative of two concurrently running/ completed contracts.</p> <p align="center"><u>AND</u></p> <p>At least 360 MT for Structure Erection work, within a period of twelve consecutive months in cumulative of two concurrently running/ completed contracts.</p> <p align="center"><u>OR</u></p> <p>B.5.2.2: At least 240 MT for Structure Fabrication work, within a period of twelve consecutive months in one running/ completed contracts.</p> <p align="center"><u>AND</u></p> <p>At least 240 MT for Structure Erection work, within a period of twelve consecutive months in one running/ completed contracts.</p> | | | |
| B.6 | <p>B.6: Bidder should have executed either "Shell of one RCC Chimney of atleast 165 Mtr" OR "Shell of one NDCT (Natural Draft Cooling Tower) of atleast 110 Mtr".</p> | | | |
| <p>NOTE:</p> <ol style="list-style-type: none"> BIDDERS MUST CLEARLY INDICATE IN THE TABLE ABOVE, HOW THEY ARE SATISFYING TECHNICAL PQR ALONG WITH THE REFERENCE OF THE SUPPORTING DOCUMENTS. BHEL WILL NOT CONSIDER ANY OTHER DOCUMENT OTHER THAN THOSE SPECIFIED BY THE BIDDERS IN THE TABLE ABOVE FOR EVALUATION OF TECHNICAL PQR. BIDDER MAY ATTACH SEPERATE SHEET IF NECESSARY. | | | | |

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/NTPRT-CVL CHIMNEY-U-03/2096

Page 29 of 90

ANNEXURE - 2

CHECK LIST

NOTE: - Tenderers are required to fill in the following details and no column should be left blank

| | | | |
|-----|--|--|-----------------------|
| 1 | Name and Address of the Tenderer | | |
| 2 | Details about type of the Firm/Company | | |
| 3.a | Details of Contact person for this Tender | Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No: | |
| 3.b | Details of alternate Contact person for this Tender | Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No: | |
| 4 | EMD DETAILS | DD No: Date : Bank : Amount: <u>Please tick (√) whichever applicable:-</u> ONE TIME EMD / ONLY FOR THIS TENDER | |
| 5 | Validity of Offer | TO BE VALID FOR SIX MONTHS FROM DUE DATE | |
| | | APPLICABILITY (BY BHEL) | ENCLOSED BY BIDDER |
| 6 | Whether the format for compliance with PRE QUALIFICATION CRITERIA (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format | Applicable/ Not Applicable | YES / NO |
| 7 | Audited profit and Loss Account for the last three years | Applicable/ Not Applicable | YES/NO |
| 8 | Copy of PAN Card | Applicable/ Not Applicable | YES/NO |
| 9 | Whether all pages of the Tender documents including annexures, appendices etc. are read understood and signed | Applicable/ Not Applicable | YES/NO |
| 10 | Integrity Pact | Applicable/ Not Applicable | YES/NO |
| 11 | Declaration by Authorized Signatory | Applicable/ Not Applicable | YES/NO |
| 12 | No Deviation Certificate | Applicable/ Not Applicable | YES/NO |
| 13 | Declaration for Reverse Auction by Bidder | Applicable/ Not Applicable | YES/NO |

| |
|---|
| <p>Registered Office: BHEL House, Siri Fort, New Delhi – 110 049, India Website: www.bhel.com</p> |
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**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 30 of 90

| | | | |
|----|---|---------------------------------------|---------|
| 14 | Declaration confirming knowledge about Site Conditions | Applicable/ Not Applicable | YES/NO |
| 15 | Declaration for relation in BHEL | Applicable/ Not Applicable | YES/NO |
| 16 | Non-Disclosure Certificate | Applicable/ Not Applicable | YES/NO |
| 17 | Bank Account Details for E-Payment | Applicable/ Not Applicable | YES/NO |
| 18 | Capacity Evaluation of Bidder for current Tender | Applicable/ Not Applicable | YES/NO |
| 19 | Tie Ups/Consortium Agreement are submitted as per format | Applicable/ Not Applicable | YES/ NO |
| 20 | Power of Attorney for Submission of Tender/Signing Contract Agreement | Applicable/ Not Applicable | YES/NO |
| | Power of Attorney of Consortium Partner. | | |
| 21 | Analysis of Unit rates | Applicable/ Not Applicable | YES/NO |

NOTE: STRIKE OFF 'YES' OR 'NO', AS APPLICABLE. TENDER NOT ACCOMPANIED BY THE PRESCRIBED **ABOVE APPLICABLE DOCUMENTS** ARE LIABLE TO BE SUMMARILY REJECTED.

DATE :

AUTHORISED SIGNATORY

(With Name, Designation and Company seal)

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/NTPRT-CVL CHIMNEY-U-03/2096

Page 31 of 90

ANNEXURE-3

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House" Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context of meaning hereof shall include its successors or assigns of the ONE PART

And

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 - Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 32 of 90

Section 2 – Commitments of the Bidder(s)/ Contractor(s)

- 2.1** The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
- 2.1.1** the Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2** The bidder(s)/ Contractors(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3** The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4** Foreign Bidders (s)/ Contractor(s) shall disclose the name and address of agents and representative in India and India Bidder(s)/Contractor(s) to disclose their foreign principals or associates. The Bidders (s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2** The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and execution from future contracts

If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors" framed by the Principal.

Section 4 – Compensation for Damages

- 4.1** If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2** If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 33 of 90

Section 5 – Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on his subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 – Equal treatment of all Bidders/ Contractors/ Sub-Contractors

- 6.1 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors.
- 6.2 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section -7 Criminal Charges against violating Bidders/ Contractors/ Sub-contractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Sub-contractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section – 8 Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractors(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s)/ Sib-contractor(s) with confidentiality in line with Non-disclosure agreement.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meeting could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- 8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.

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**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 34 of 90

- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.9 IEM should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organization.
- 8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.12 The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

- 9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidder 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.
- 9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 – Other Provisions

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.
- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the reminder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

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**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 35 of 90

10.5 Only those Bidders/ Contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On Behalf of the Principal

For & On Behalf of the Bidder/ Contractor

(Office Seal)

(Office Seal).

Place -----

Date -----

Witness: _____

Witness: _____

(Name & Address) _____

(Name & Address) _____

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/NTPRT-CVL CHIMNEY-U-03/2096

Page 36 of 90

ANNEXURE-4

IMPORTANT INFORMATION

E-Tender for this work is invited by BHEL PSWR NAGPUR and offer shall be submitted through BHEL e-procurement portal only. All correspondences regarding this tender shall be through E-procurement portal.

Postal Address:

AGM /Purchase BHEL PSWR,
SRIMOHINI COMPLEX, 345 KINGSWAY, NAGPUR 440001, INDIA

Following are the concerned BHEL officials to whom bidders can contact in case of any difficulty:

AGM Purchase, Email: prchiwarkar@bhel.in. Ph: +91 - 712 - 3048 - 633
Dy Manager Purchase, Email: nktiwari@bhel.in, Ph: +91 - 712 - 3048 - 651
Sr Engineer Purchase, Email: svm@bhel.in, Ph: +91 - 712 - 3048 - 715
Asst. Engineer Purchase, Email: bajjnath@bhel.in , Ph: +91 - 712 - 3048 - 652

- 1. The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site (www.bhel.com → Tender Notification → List of Banned Firms)**
- 2. Refer Chapter XII of Volume IB Special Conditions of Contract regarding Suspension of Business Dealings: The abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' has now been uploaded on www.bhel.com on "supplier registration page" at the following link: http://www.bhel.com/vender_registration/pdf/Suspension_guidelines_adbridged.pdf**
- 3. The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com.**

3.0 Integrity commitment, performance of the contract and punitive action thereof:

3.1. Commitment by BHEL:

BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.

3.2. Commitment by Bidder/ Supplier/ Contractor:

3.2.1. The bidder/ supplier/ contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.

3.2.2. The bidder/ supplier/ contractor will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in

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Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 37 of 90

connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.

3.2.3. The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.

If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such bidder/ supplier/ contractor as per extant guidelines of the company available on www.bhel.com and/or under applicable legal provisions”.

4. **“Pradhan Mantri Kaushal Vikas Yojna:** The contractor shall, at all stages of work deploy skilled/semi-skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute/Industrial Training Institute/ National Institute of Construction Management and Research (NICMAR), National Academy of Construction, CIDC or any similar reputed and recognized Institute managed/ certified by State/ Central Government. The number of such qualified tradesmen shall not be less than 20% of total skilled/semi-skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer-in-Charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer-in-Charge. Failure on the part of contractor to obtain approval of Engineer-in-Charge or failure to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate of Rs.100 per such tradesman per day. Decision of Engineer-in-Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding”.
5. **All Statutory Requirements as applicable for this project shall be complied with.**
6. **BHEL Fraud Prevention Policy: “The Bidder along with its associate/ collaborators/ sub-contractors/ sub-vendors/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.”**
7. **Following clause shall form part of the HSE documents issued under Chapter IX of Volume IB ‘Special Conditions of Contract’**

“In case of any financial deduction made by Customer for lapses of safety other than what is provided elsewhere in the contract, the same shall be charged on back-to-back basis on the defaulting contractor without prejudice to any other right spelt anywhere in the tender /contract”
8. **Please take note of following Revised Tender Clauses:**
 - Notice Inviting Tender: Sl No 4 and corresponding Changes in GCC Clause No 1.9 regarding EMD
 - General conditions of Contract: Clause 1.10, 2.13, 1.15.11, Clause No. 2.7.2, Clause No. 2.7.3, Clause No 2.7.10 (New), Clause No 2.28.5 (New), Clause No 2.21.

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 38 of 90

9. Following Notes are added to Form F- 15 of Volume I D 'Forms & procedures'

- i. It is only indicative and shall be as per the online format issued by BHEL time to time.
- ii. No request will be entertained after specified date of the current month w.r.t the changes requested in the scores of immediate previous month.

10. OVER RUN COMPENSATION

Over Run Compensation Clause no. 2.12 of Vol I C GCC **shall not be Applicable** for this contract.

11. Start of Period for "Performance Guarantee for Workmanship" as per clause no 2.24 of Vol-IC GCC:

This period shall commence after the completion of Contract Period as certified by Engineer-in-Charge.

12. Delay in 1st submission of SDBG/ PBBG: SDBG/ PBG is to be furnished by the vendor before start of work. No payment will be released till SDBG/PBG is submitted by the vendor.

However if requested by the vendor, cash recovery equivalent to SDBG/ PBG value to be made from the running bills submitted by the vendor. In such case, recovery of interest calculated @SBI PLR +2% on amount equivalent to SDBG/ PBG value to be made for the gap period (difference between date of start of work and date of submission of BG/ cash recovery).

13. Compensation in case of Death/ Permanent Incapacitation of Person: BHEL shall recover the amount of compensation paid to victim (s) by BHEL towards loss of life/ permanent disability due to an accident which is attributable to the negligence of contractor, agency or firm or any of its employee as detailed below:

- a) Victim: Any person who suffers permanent disablement of dies in an accident as defined below.
- b) Accident: Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious occurrence caused during the manufacturing/ operation and works incidental thereto at BHEL factories/ offices and precincts thereof, project execution, erection and commissioning, services, repairs and maintenance, trouble shooting, serving, overhaul, renovation and retrofitting, trial operation, performance guarantee testing undertaken by the company or during any works/ during working at BHEL Units/ Offices/ townships and premises/ Project sites.
- c) Compensation in respect of each of the victims:
 - (i) In the event of death or **permanent disability** resulting from **Loss of both limbs**: Rs 10,00,000/- (**Rs Ten Lakh**)
 - (ii) In the event of **other permanent disability**: Rs 7,00,000/- (**Rs Seven Lakh**)
- d) Permanent Disablement: A disablement that is classified as a permanent total disablement under the proviso to Section 2(I) of the Employee's Compensation Act, 1923.

14. The clause 2.7.9.1 below is added under the heading "Rights of BHEL" of General Conditions of Contract Volume-IC GCC.

2.7.9.1 Provision of Penalty in case of slippage of Intermediate Milestones:

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 39 of 90

- i) Two major Intermediate Milestones are mentioned as M1 & M2 in Chapter VI: Time Schedule of Vol IA Technical Conditions of Contract.
- ii) In case of slippage of these identified Intermediate Milestones, Delay Analysis shall be carried out on achievement of each of these two Intermediate Milestones in reference to Form 14.
- iii) In case delay in achieving M1 Milestone is solely attributable to the contractor, 0.5% per week of Executable Contract Value*, limited to maximum 2% of Executable Contract Value, will be withheld.
- iv) In case delay in achieving M2 Milestone is solely attributable to the contractor, 0.5% per week of Executable Contract Value*, limited to maximum 3% of Executable Contract Value, will be withheld.
- v) Amount already withheld, if any against slippage of M1 milestone, shall be released only if there is no delay attributable to contractor in achievement of M2 Milestone.
- vi) Amount required to be withheld on account of slippage of identified intermediate milestone(s) shall be withheld out of respective milestone payment and balance amount (if any) shall be withheld @10% of RA Bill amount from subsequent RA bills.
- vii) Final deduction towards LD (if applicable as per clause 2.7.9 above), on account of delay attributable to contractor shall be based on final delay analysis on completion / closure of contract. Withheld amount, if any due to slippage of identified intermediate milestone(s) shall be adjusted against LD or released as the case may be.
- viii) In case of termination of contract due to any reason attributable to contractor before completion of work, the amount already withheld against slippage of intermediate milestones shall not be released and be converted into recovery.

* **Executable Contract Value** - Value of work for which inputs/ fronts were made available to contractor and were scheduled for execution till the date of achievement of that milestone.

15. Void.

16. Acceptance of Bank Guarantee (BG)

Revision in Acceptance of Bank Guarantee (BG) Clause no. 1.10.3 (iii) of Vol I C GCC:

Clause No. 1.10.3 (iii) of Vol IC GCC is revised as below: -

“Bank Guarantee issued by:

- a. Any of the BHEL consortium bank listed below:

State Bank of India
ABN Amro Bank N.V.
Bank of Baroda
Canara Bank
Citi Bank N.A.
Corporation Bank
Deutsche Bank
HDFC Bank Ltd.
The Hongkong and Shanghai Banking Corporation Ltd
ICICI Bank Ltd.
IDBI Ltd.
Punjab National Bank
Standard Chartered Bank

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 40 of 90

State Bank of Travancore
State Bank of Hyderabad
Syndicate Bank

- b. Any public sector Bank (other than consortium banks) with a clause in the text of Bank Guarantee that **"It is enforceable at Nagpur, Maharashtra"**.
- c. Any private sector banks, with a clause in the text of Bank Guarantee that **"It is enforceable by being presented at any branch of the bank"**.

Note: "Bank Guarantees issued by Co-operative Banks are not acceptable".

17. Broad Terms & Conditions of Reverse Auction

In continuation to Clause 19.0 of NIT (Notice Inviting Tender) following are the broad terms and conditions of Reverse Auction for which Declaration Proforma by bidder has been given in Annexure VI of NIT:

BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on www.bhel.com) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. Bidders to give their acceptance with the offer 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.

Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit 'Process compliance form' (to the designated service provider) as well as 'Online sealed bid' in the Reverse Auction. Non-submission of 'Process compliance form' or 'Online sealed bid' by the agreed bidder(s) will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com).

The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along with the offer. **The envelope sealed price bid of successful L1 bidder in RA, if conducted, shall also be opened after RA and the order will be placed on lower of the two bids (RA closing price & envelope sealed price) thus obtained. The bidder having submitted this offer specifically agrees to this condition and undertakes to execute the contract on thus awarded rates.**

If it is found that L1 bidder has quoted higher in online sealed bid in comparison to envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender in the unit, it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com).

As a reminder to the bidders, system will flash following message (in RED color) during the course of 'online sealed bid':

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 41 of 90

“Bidders to submit online sealed bid less than or equal to their envelope sealed bid already submitted to BHEL”

Note:- In case the tender is an e-tender and bids are submitted on e-procurement portal of BHEL → <https://bhel.abcprocure.com>, the term ‘envelope sealed bid’ to be read as “price bid in e-procurement portal”.

- 18. MSE Vendors:** MSE bidders kindly to take note that EMD (Earnest Money Deposit) shall be furnished by MSE bidders as well, as per the amount and procedure indicated in the NIT/GCC.

Micro & Small Enterprises (MSE) is exempted from Payment of Tender Fees (as in Sl No 1 viii of NIT) and Earnest Money deposit (EMD) (as in Sl No 1 vii of NIT), if Applicable.

To avail this benefit, participating MSEs should be registered with District Industries Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or Udyog Aadhaar Memorandum or any other body specified by Ministry of Micro Small and Medium Enterprises.

MSE bidders can avail the above benefit only if they submit along with the offer, copies of either Udyog Aadhaar Memorandum or EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with copy of a CA certificate (format enclosed at Annexure- 5 where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (part 1 in case of two part bid). Non submission of said documents will lead to consideration of their bid at par with other bidders in terms of EMD. No benefit shall be applicable for this enquiry, if any deficiency in the above required documents is not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal.

19. PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA) CLAUSE:

“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 but before finalization of contract/ PO/ WO against this NIT.

In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable.”

20. Integrity Pact:

- (a) IP is a tool to ensure that activities and transactions between the company and its Bidder/Contractors are handled in a fair, transparent and corruption free manner.
Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

| SI | IEM | Address | Phone & Email |
|----|-----|---------|---------------|
|----|-----|---------|---------------|

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 42 of 90

| | | | |
|---|--|--|----------------------------|
| 1 | Shri D R S Chaudhary, IAS (Retd.) | E--1/164 Arera Colony, Bhopal 462016 (M. P.) | dilip.chaudhary@icloud.com |
| 2 | Mrs. Pravin Tripathi, IA & AS (Retd.) | D-243, Anupam Gardens, Lane IB, Neb Sarai, Sainik Farms, New Delhi - 110 068 | Pravin.tripathi@gmail.com |

- (b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in bidding. In other words, entering into this pact would be a preliminary qualification.
- (c) Please refer section-8 of the IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification /issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:

Details of contact person (s):

Name: (1) P R Chiwarkar/ AGM (Purchase) (2) Neeraj Tiwari/ Dy Manager (Purchase)
Dept.: Purchase Department
Address: Shreemohini Complex, 345 Kingsway, Nagpur-440001
Phone: (LL/ Mobile) (1) 0712-3048633 (2)0712-3048651
Email: prchiwarkar@bhel.in (2) nktiwari@bhel.in
Fax: 0712-3048699

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**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/NTPRT-CVL CHIMNEY-U-03/2096

Page 43 of 90

ANNEXURE-5

MSE ANNEX

Certificate by Chartered Accountant on letter head

This is to Certify that M/s _____, (hereinafter referred to as 'company') having its registered office at _____ is registered under MSMED Act 2006, (Entrepreneur Memorandum No _____ (Part-II) _____ dtd: _____, Category: _____ (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the latest audited financial year _____ as per MSMED Act 2006 is as follows:

1. For Manufacturing Enterprises: Investment in plant and machinery (Le. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006:

Rs _____ Lakhs

2. For Service Enterprises: Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:

Rs _____ Lakhs

The above investment of Rs _____ Lakhs is within permissible limit of Rs _____ Lakhs for _____ Micro / Small (Strike off which is not applicable) Category under MSMED Act 2006.

OR

The company has been graduated from its original category (Micro/ Small) (Strike off which is not applicable) and the date of graduation of such enterprise from its original category is..... (dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such enterprise from its original category as notified vide S.O. No. 3322(E) dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:
(Signature)

Name—

Membership number—

Seal of Chartered Accountant

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**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

Page 44 of 90

ANNEXURE-6

Declaration for Reverse Auction

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration for Participation in Reverse Auction (RA)

Ref: NIT/Tender Specification No: BHE/PW/PUR/BWT6-MAIN CIVIL+CHIMNEY/3004

We declare that we will participate in Reverse Auction (RA) if BHEL decides for that instead of opening the sealed envelope/ E-Procurement Portal Price Bid, submitted by us. We have read all the guidelines of reverse auction available in tender enquiry as well as on www.bhel.com portal. We also declare that during reverse auction:

- ❖ We will submit online sealed bid less than or equal to of our envelope sealed/ E-Procurement Portal price bid already submitted to BHEL along with the offer.

We also declare to submit the “Process Compliance Form” (to the designated service provider) as well as “Online Sealed Bid” in the Reverse Auction, in case BHEL decides to go for that.

Yours Faithfully,

(Signature, Date & Seal of Authorized
Representative of the Bidder)

Date:

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Website: www.bhel.com

3004

TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHARAT HEAVY ELECTRICALS LIMITED



CONTENTS

.....

| SI No | DESCRIPTION | Chapter |
|------------------|---|--------------|
| Volume-IA | Part-I: Contract specific details | |
| 1 | Project Information | Chapter-I |
| 2 | Scope of Works and Technical Specifications | Chapter-II |
| 3 | Facilities in the scope of Contractor/BHEL (Scope Matrix) | Chapter-III |
| 4 | T&Ps and MMEs to be deployed by Contractor | Chapter-IV |
| 5 | T&Ps and MMEs to be deployed by BHEL on sharing basis | Chapter-V |
| 6 | Time Schedule | Chapter-VI |
| 7 | Terms of Payment | Chapter-VII |
| 8 | Taxes and other Duties | Chapter-VIII |
| 9 | Tender Drawings | Chapter-IX |
| 10 | Appendix | Chapter-X |
| 11 | Bill of Quantities and % Weightage of Individual Items | Chapter-XI |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - I: PROJECT INFORMATION

| Sl. No. | Description | Details |
|---------|------------------------------------|--|
| 1 | Project Title | 1x660 MW Bhusawal Thermal Power Station, Unit-6 |
| 2 | Customer | Maharashtra State Power Generation Company Limited |
| 3 | Location | Situated in the vicinity of village Fekori beside Mumbai-Nagpur NH-6 at a distance of about 8 Km towards Nagpur from Bhusawal town in Jalgaon district in Maharashtra. |
| 4 | Nearest Railway Station | Bhusawal (Approx. 8 Kms) |
| 5 | Nearest Airport | Aurangabad (Approx. 170 Kms) |
| 6 | Nearest Seaport | Mumbai (Approx. 461 Kms) |
| 6 | Access By Road/Major Cities | Mumbai-Nagpur Highway (NH-6) – 360 Kms from Nagpur |
| 7 | Source of Coal | Machaakata coal block, Odisha state. |
| 8 | Source of Water | Ozerkheda Reservoir (Approx. 18 Kms) |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

2.0 SCOPE OF WORK:

The scope of work comprises of;

Part-A: “Construction of all Civil, Structural and Architectural works in conformity with the approved mechanical/ electrical layout including supply of all materials for buildings, equipment and facilities for the project listed below **except Cement, Structural Steel & Reinforcement Steel (TMT) that shall be supplied by BHEL free of cost** as per Schedule of Items. **Before commencement of any major foundations, the bidders have to check with mechanical/electrical drawings jointly with concerned BHEL Engineers.**

Part-B: Construction of 275m height RCC Single Flue Chimney with installation of Borosilicate Glass Block Lining on Inner Surface of Steel Flue CAN including supplying and installation of electrical items in conformity with the approved layout. The scope of work include supply of all materials, equipment and facilities required **except Cement, Structural Steel & Reinforcement Steel (TMT) that shall be supplied by BHEL free of cost** as per Schedule of Items.

2.1 Area Grading & Levelling for entire plant including CHP/AHP/Railway Siding Area, Boundary Wall and Roads & Drains:

- a) All works involved in leveling the site specified in the drawing/ as directed by Engineer-in-Charge to the lines, grades, cross sections and dimensions as shown in the approved drawings and/or as directed by the Engineer-in-Charge including site clearance, setting out, earth work in excavation, stacking, loading, transportation, unloading, dewatering, drainage, filling, watering, compaction, lighting, disposal of residual/ surplus earth etc. It also includes supplying and providing all labours, materials, supervision, services, equipment, tools and plants, field and laboratory testing and all incidental items of work not shown or specified but reasonably implied or necessary for the completion of the work etc. All tools and plants, equipment and machineries to be used in this work shall be of standard quality and manufactured by reputed concerns conforming to Indian Standard (IS) codes or equivalent thereof.
- b) The proper slope shall be maintained at interfaces between areas having difference of level. Un-Coursed Random Rubble (UCR)/RCC retaining wall shall be provided as per requirement to retain the soil.
- c) Cutting of trees including stacking of usable materials identified by BHEL at suitable location and disposal of unused materials at a location identified by engineer-in-charge and in a manner decided by him.
- d) Stripping of top soil up to a maximum depth of 300mm below ground level so as to exclude all debris, grass, vegetation, bushes, and trees having girth up to 300mm including roots and organic materials etc. and compacting the stripped surface by manual/mechanical means.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

- e) Excavation shall be carried out in the areas of level higher than the finished ground level and filling with selected earth from excavation in the areas of level lower than that of finished ground level.
- f) Disposal and stacking of surplus excavated earth at a location identified by BHEL/MSPGCL (Referred to as Owner here onwards)/MSPGCL's Consultant.
- g) Demolition of existing over ground structures (including foundation)/ facilities, if any, and site clearance.
- h) The Un-Coursed Random Rubble (UCR) compound walls along with gates. The scope under this includes as below;
 - (i) Dismantling of existing compound walls shown in the drawing or as directed by Engineer-in-Charge.
 - (ii) Providing new UCR compound wall with anti-climbing arrangement as per drawing and /or as directed by Engineer-in-Charge. Wherever required, retaining wall below compound wall shall also be included in the scope of the contract.
 - (iii) Providing chain link fencing between 2x500 MW and 1x660 MW plant and wherever required as per drawing or as directed by Engineer-in-Charge.
 - (iv) Suitable arrangement at crossing of compound wall with pipe lines, drains, nallah, railway lines, etc. shall also be provided by the bidder.
 - (v) The gate of suitable size along with compound wall shall be provided as per drawing or as directed by Engineer-in-Charge.
- i) Plant Roads and Drains including Culverts, road crossings, etc.
- j) Drainage network (storm water drains, oils/effluent & sewage water).
- k) In Railway siding area Grading, levelling & dressing (finished grade levels shall be as mentioned in Plot plan and Area Grading Drawings) but in the rail track portion if required necessary excavation, filling shall be carried out for base formation below rail track, toe wall, retaining wall, drain and other foundation etc. and other related activity as per prevailing standard engineering practices of Railways.
- l) Supporting arrangement for auxiliary steam line to be tapped from the existing 2x500MW units is in bidder's scope.

2.2 Civil, Structural and Architectural Works of following Major Buildings/Structures covered under this scope of work but not limited to it:

2.2.1 Boiler, Turbine and Generator including its Auxiliaries;

- a) **Boiler and its Auxiliaries:** Foundation, Pedestal with foundation bolt, Plinth Beam, Backfilling to the required level and/or as directed by Engineer-in-Charge, Lift Foundation, Grade Slab/ Paving, etc.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

- b) **Bunker and Mill Building:** Steel framed building consists of Foundations, Feeder Floor, Tripper Floor and Roof Slab including Deck Sheeting and Side Cladding, etc. Fabrication and Erection of Floor Beams, Hopper & its Supporting Structure including SS Liner, etc.
- Note:** Fabrication and Erection of Main Column, Main Beam, Ties and Bracings for Mill Bunker Bay are excluded from scope of work.
- c) **Fan Foundations:** Foundation of FD, PA, ID, SA & GR Fans including/excluding installation of Vibration Isolation System, Grade Slab/Paving, etc.
- d) **ESP & ESP Duct Foundation:** Foundation, Pedestal with foundation bolt, Plinth Beam, Backfilling to the required level or as directed by Engineer-in-Charge, Handing Over to Mechanical Erection including Approach, Grade Slab/ Paving, etc.
- e) **ESP Control Building:** RCC framed structure consists of Foundation, Pedestal with foundation bolt, Plinth Beam, Intermediate Floor Slabs, Roof Slabs, Grade Slab/Paving, Miscellaneous Equipment Foundations, Cable Trench, Other Civil Work, Architectural Works, Miscellaneous Structure Works required to complete the Building.
- f) **Power House Building:** Steel framed structure which houses the turbine generator and related equipment. The building consists of Foundations, Pedestals with foundation bolts, Plinth Beams, Backfilling to the required level or as directed by Engineer-in-Charge, Fabrication and Erection of Structure Steel, Intermediate Floor Slabs, Roof Slabs including/excluding Deck Sheet, Side Cladding, Grade Slab/Paving, Miscellaneous Equipment Foundations like BFP Foundations, ACW Pump Foundations, DMCW Pump Foundations, etc., CEP Pit, CW Pit, Cable Trenches, Plinth Protection with Garland Drain, etc., Other Civil, Structural and Architectural Works required to complete the Building.
- g) **TG Foundation including Deck:** Foundation, Column, TG Deck (including Design and Approval of Shuttering Arrangement), Condenser Wall, etc. including Temperature Controlled Concrete, UPV Testing, etc. as per drawing or as directed by Engineer-in-Charge.
- h) **Transformer Yard:** Transformer Foundations (GT, ST, Service and Auxiliary Transformer Foundations etc.), Fire wall, Rail Track embedded in concrete, Fencing & Gates, Other Misc. Foundations, Grade Slab/Paving, Surface Drains, Cable Trenches, Oil Collection Drain Pit, Gravel Filling in Transformer Area, etc.
- i) **Compressed Air system with Air Compressor & DG building, Equipment foundation, DG foundation etc. with earth mat.:**
- j) **CPU regeneration area completes with neutralizing pit**
- k) **Mill reject storage silo and handling system**
- l) **Portion of CHP & AHP Works like Bottom Ash Hopper, TPs & Trestles between Boiler & ESP, etc.**

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

2.2.2 Water System:

- a) **Raw Water & Fire Water Storage Tank and its Pump Houses:** Storage tank shall be of RCC Construction with two compartments each of capacity 24000 Cum in which one shall be operative & other in maintenance. Raw water/Fire water pump house with gates and stop logs, trash racks maintenance facilities, switch gear/MCC rooms, equipment foundations along with earth mat including incoming water pipe line from Raw water tapping from proposed water line for 2 x 500 MW unit to Raw water storage tank which is about 1 Km away.
- Pump House shall be provided for housing raw water/fire water pump. Separate bays shall be provided for each pump by providing intermediate dividing RCC piers between the pumps.
- b) **Raw water Pipe Line supporting structure & Equipment foundation:**
- c) **Raw Water Treatment Plant:**
- (i) **Pre Treatment Plant:** Consists of Cascade Aerator, Stilling Chamber, Flash Mixer, DM & Non-DM Water Clarifier, Gravity Filters, connecting channels, etc.
 - (ii) **Chemical House**
 - (iii) **Filter Water Tank & Pump House:** Filter Water Tank shall be RCC Construction having two compartments covered with RCC roof and shall be partly underground and partly over ground.
 - (iv) **CW Treatment cum Ozonization Building & Side Stream Filtration Plant:** The building shall be a RCC framed single storey.
 - (v) **DM Plant:** DM plant building, Equipment foundation along with earth mat, DM water storage tanks and foundations, neutralization pit, chemical lab, including all necessary piping foundation.
 - (vi) **DM Storage Tank:** The tank outside the DM Plant shall be supported on sand pad with ring wall.
- d) **Pipe & Cable Trestles and Foundations:** All cables & pipes in outdoor area shall run above ground over steel trestles or other supporting structures for easy inspection & maintenance except in some localized area where the same can run in R.C.C. trenches. In case over ground routing is not feasible due to site constraints, the pipe/cable shall be routed through duct-banks.
- e) **Clarified Storage Tank and Pump House**
- f) **CW/ACW Sump & Pump House:** Cooling water (CW) pump house for housing cooling water pumps and auxiliary cooling water pumps shall be provided. Separate bays shall be provided for each pump by providing intermediate dividing piers /walls of RCC between the pumps.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

The sub-structure of CW/ACW pump houses including their fore bays shall be RCC and the superstructure of all pump houses shall consist of structural steel frames.

The works consists of Raft Foundations, Walls, Screens & Gates, Foundation Bolts, Fabrication & Erection of Structure Steel, Intermediate Floor Slabs, Roof Slabs including/excluding Deck Sheet, Side Cladding (if any), Grade Slab/Paving, Miscellaneous Equipment Foundations, Cable Trenches, Plinth Protection with Garland Drain, etc., Other Civil, Structural and Architectural Works required to complete the Building.

2.2.3 Fuel Oil System:

- a) **Fuel Oil Transfer/Pressurizing Pump House:** The pressuring & transfer pump house shall be of RCC framed structure. A separate maintenance bay and MCC/Control room shall be provided in these pump houses.
- b) **HFO & LDO Tank & its Pressurizing Pump House**

2.2.4 Non-Plant Buildings:

- a) Service Building Sub structure and super structure along with interconnections to main plant building, Centralized AC Plant and passenger lifts.
- b) Lube oil storage shed along with empty barrel storage yard.
- c) Gas cylinder storage building
- d) FOPH foam shed
- e) Store complex with/without Security office/Cabins
- f) Canteen Building
- g) Time office cum security office complex
- h) Coal sampling room and Processing room in CHP area
- i) Weigh Bridge for dry ash silo
- j) Gate office with parking facilities
- k) Centralized Effluent Treatment Plant including central monitoring basin, coal pile runoff settling pond, oil water separator including complete plant waste water collection and disposal system.
- l) Centralized sewage treatment plant including complete sewage water collection and disposal system.

2.2.5 FGD, SCR, Ammonia Shed, Weigh Bridge, etc:

- a) FGD control room
- b) Ball mill building

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

- c) Gypsum dewatering building
- d) RC pump & Oxidation blower house
- e) SO2 Analyzer room
- f) Drain sumps
- g) Misc. tank foundations
- h) Limestone storage silo
- i) Absorber foundation
- j) FGD flue gas duct foundation
- k) Pipe rack including foundation
- l) RC pump foundation
- m) Oxidation blower foundation
- n) Wet lime stone ball mill foundation
- o) HT/LT Transformer foundations.
- p) Misc. pump foundations
- q) Instrument Air receiver, GGH air receiver, Vacuum receiver foundations

2.2.6 Civil, Structural and Architectural works related to following services:

- 1) Storm Water drain system under this contract scope of work
- 2) Crane movement road, main road approach roads, drains culverts
- 3) ERC/IRC
- 4) Sanitary and plumbing system in the buildings (for the buildings within the scope of this contract only)
- 5) RCC Electrical/Instrumentation cable trenches and pipe trenches
- 6) Pipe way Bridges
- 7) Pipe way Sleepers
- 8) Crossings (Culverts, bridges, sleeves as per applicable) of underground services below approach road for all services in the corridor including drains, fire water lines, cooling water lines, waste sewers.
- 9) Hard stand required for erection of heavy equipment.
- 10) Strengthening of existing roads for crane movement if required.
- 11) All approach roads from existing main roads as per detailed engineering requirement for maintenance and operation.
- 12) Maintenance and erection approach roads/ by strengthening of roads.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

- 13) Any temporary activities required to complete the work.
- 14) Structural platforms, monorail beams, walkways, crossovers, handrails etc for miscellaneous equipments, piping etc.
- 15) Micro grading & disposal of surplus and unserviceable material beyond project complex's compound wall. Contractor to assess the lead by physically visiting the Plant site.
- 16) The sub-grade for roads & pavements and soil improvement/ preparation below foundation level of drains, culverts, pipe way bridges, manholes, etc. shall be carried out as per Geo- Technical recommendation.

2.2.7 The work will involve:

All civil work required to complete Civil and architectural works for the scope of work including RCC work, earth work, concrete work, brick work, steel work, embedment, plastering and painting, wooden and metal doors, windows and partitions, waterproofing, flooring, ceiling, plumbing works, sanitary works, fabrication and erection of steel, road work, drainage, grouting etc.

2.3 Construction of RCC Chimney:

- 2.3.1 The work comprises of construction of 275m high Reinforced Concrete Single Flue Chimney complete with RCC Raft Foundation, RCC Shell, Internal Steel Platforms, Staircase, Appurtenances, Fixtures, Fittings, Conduit and other Embedment, Lift (inside windshield), Ventilation etc. complete, insulation and provision of other accessories including external platforms, fabrication and fixing of flue duct inside the chimney, complete interior and Air Aviation Obstruction lighting system, gas sampling ports, opacity measurement ports, lightning protection and grounding system, doors for access to the shell, external platforms and inspection of the liners, ladders, communication system components, embedment for installation of equipment and fixtures and painting both internal and external of the chimney shell as well as of all doors, stairs, ladders and other structural steel items in accordance with this specification and approved drawings.
- 2.3.2 Supply including design, receipt, unloading, erection, testing and commissioning of stack elevator and electrical equipment; allied items, cabling, earthing, spares etc. are also under the scope of this of work. The complete works have to be carried out by providing all labour, supervision, materials, scaffolding, power, fuel, construction equipment, tools & plants, inspection, measuring, testing instruments, supplies, transportation, storage, and all incidental items not herein specifically mentioned but reasonably or found required for the successful completion of work including contractor's and where necessary manufacturer's expert supervision in strict compliance with the requirement of this specification and approved construction drawing.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

2.3.3 Installation of Borosilicate Glass Lining inside MS Flue CANS, including surface preparation, application of primer, adhesive etc. as per the technical specifications and approved erection procedure under the expert supervision of Borosilicate Glass Lining manufacturer /supplier. The complete works have to be carried out by providing all labour, supervision, materials, scaffolding, power, fuel, construction equipment, tools & plants, inspection, measuring, testing instruments, supplies, transportation, storage, and all incidental items not herein specifically mentioned but reasonably or found required for the successful completion of work. Borosilicate Glass Lining Materials, Primer, Adhesive (suitable fixing materials) and Expert Supervision of Manufacturer shall be provided by BHEL as Free of Cost Items.

2.4 General Scope:

- 2.4.1 Furnishing all labour, materials, supervision, construction plans, equipment, supplies, transport, to and fro the site, fuel, electricity, compressed air, water, transit and storage insurance and all other incidental items and temporary works not shown on specified but reasonably implied or necessary for the proper completion, maintenance and handling over the works, except in accordance with the stipulations laid down in the contract documents and additional stipulations as may be provide by the engineer during the course of works.
- 2.4.2 Furnishing samples of all materials required by the engineers for testing/inspection and approval for use in the works. The samples may be retained by the engineer for final incorporation in the works.
- 2.4.3 Furnishing test reports for the products used or intended to be used, if called for the specifications or if so desired by the engineer.
- 2.4.4 Giving all notices, paying all fees, taxes etc., in accordance with the general conditions of contract, that is required for all works including temporary works.
- 2.4.5 Arranging manufacturer’s supervision for items of work done as per manufacturer’s specifications when so specified.
- 2.4.6 Carrying out topographic survey of the entire and establish levels and coordinates at suitable intervals from existing grid levels and coordinates furnished by the owner established bench marks, setting out the locations and levels of proposed structures, constructions and marking of reference pillars and other identification works etc., The contractor shall provide the owner/BHEL such a assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used.
- 2.4.7 Providing all incidental items not shown or specified but reasonably implied or necessary for the successful completion of the work in accordance with contract.
- 2.4.8 Arranging for joint checking (with BHEL / BHEL’s Customer / Consultant) of all site construction activities Preparation of joint protocols for each & every activity and maintaining quality records for audit/inspection as per approved FQP by BHEL.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

2.4.9 The drawings enclosed with this tender are intended to give the tenderer a general idea of the type and extent of work involved. The drawings are as such only indicative and not to be considered as the exact construction drawings.

Further this is to be noted that the drawings and the documents furnished along with this specification are the sole property of BHEL. It must not be used directly or indirectly in any way detrimental to the interest of the company.

2.4.10 The scope of work will also include such other related works although they may not be specifically mentioned in the above paragraph and all such incidental items not specified but reasonably imply and necessary for completion of the job as a whole all as desired and as directed by the engineer.

2.4.11 The detail scope of work covered above is not a comprehensive list of items of work involved. The detail scope of work may vary considerably depending on the actual construction requirements as per RFC Drawings.

2.4.12 Laying / Cutting & Re-welding of associated electrical earthing works below the road & drains and surrounding areas shall also be done by civil contractor as per drawings for which 40mm dia MS rod/GI flats shall be supplied by BHEL free of cost.

2.4.13 In certain cases, Crushed Stone Sand/M-Sand may be added to Natural sand in order to achieve the required grading with prior approval of the Customer/Consultant and subsequent design mix report from reputed institute like IITs/NITs/Any Other Government Institutes. Crushed Stone Sand/M-sand alone may be used only with the prior approval of the BHEL Engineer/Customer/Consultant for filling and Concreting works.

2.4.14 **The bidder shall quote his price considering only River Sand usage.** If crushed stone sand/M-sand is used in place of river sand, **rebate of Rs. 100/- per Cum of M-Sand** consumed shall be applicable for all items/ works where M-Sand is used in place of River sand. Measurement for the rebate shall be calculated based on quantity of M-Sand consumed in the particular item, not on the quantity of the particular item.

For Example, if the M-Sand consumption per Cum of concrete is 0.5 Cum, the measurement for the rebate shall be considered for 0.5 Cum of M-Sand consumption only, not for 1 Cum of concrete. This is applicable for all items of BOQ where M-Sand is used in place of River Sand.

2.5 Preamble for the schedule of quantities/BOQ:

2.5.1 Details of the items in this Schedule shall be read in conjunction with the Corresponding Consultants/ MSPGCL specifications, drawings and other documents and shall have precedence over any contrary statement mentioned anywhere in this document.

2.5.2 The work shall be carried out as per construction drawings, specifications, the description of the items in this schedule and/or Engineer's instructions, Drawings enclosed with these documents are only indicative giving some idea of the type of

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

work involved. The layout, sizes and details of the building, structures and foundations shown in tender drawings may vary at a large extent during actual construction. Final drawings will be issued progressively during the execution of the work.

- 2.5.3 Items of work provided in this schedule but not covered in the specifications shall be executed strictly as per instructions of the Engineer.
- 2.5.4 Unless specifically mentioned otherwise in the contract, the bidder shall quote his rates for the finished items and shall provide for the complete cost towards fuel, tools, tackle, equipment, constructional plant, temporary works, labour materials, levies, taxes, transport, layout, repairs, rectification, maintenance till handing over, supervision, shops, establishments, services, temporary roads, revenue expenses, contingencies, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the works according to the contract.
- 2.5.5 The rate shall also be inclusive of carrying out topography survey of site to establish levels and coordinates at suitable intervals, from existing grid levels and coordinates furnished by the owner, establish bench marks, setting out the location and levels of the proposed structures, constructions and making references, pillars and other identification marks etc. No separate payment will be made towards the same.
- 2.5.6 The quantities of the various items mentioned in the schedule are approximate and may vary up to any extent or be deleted altogether. The overall variation in contract value on execution shall be dealt as per GCC. Contractor has to obtain prior approval of BHEL/ MSPGCL before procurement of bought out items/ building materials.
- 2.5.7 Engineer decision shall be final and binding on the contractors regarding clarification of items in this schedule with respect to the other section of the contract.
- 2.5.8 In case of any discrepancy between item description, relevant drawing and/or specification, clarification shall be sought at tender stage itself. Otherwise it shall be assumed that the bidder has quoted for the more stringent requirement.
- 2.5.9 Mix design (M-20, M-25, M-30 & M-35) for all concreting shall be carried out either at site or from a reputed institute, contractor has to ensure adding of admixture and minimizing of cement content in line with IS 456 as advised by BHEL time to time without any additional cost.

2.6 **Hierarchy:**

In case of any conflict/deviations amongst various documents, the order of precedence shall be as follows:

- 1) Statutory Regulations
- 2) MSPGCL Technical specification
- 3) Items in Schedule of quantities

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

- 4) IS standards
- 5) BHEL Specification Section – D

2.7 Construction Power (Provided by BHEL free of cost):

- 2.7.1 Construction power (three phase, 415 V/ 440 V) will be provided free of cost at one point near the site at a distance of approx. 500M. Further distribution shall be arranged by the contractor at his own cost and services. Contractor shall be responsible for fulfillment of all requirements including statutory requirements in this regard. Contractor shall deploy and install required energy meter, cables, fuses, distribution boards, switchboards, bus bars, earthing arrangements, protection devices and any other installation as specified by statutory authority/act. Contractor shall also obtain approvals of appropriate authority and pay necessary fees, levies etc towards the clearance of such installations, prior to use. Sufficient power factor compensation equipments like capacitor shall be provided by contractor for reactive loads like welding machines etc. In case of any fine/penalty on account of low power factor, same shall be shared by contractor proportionately according to power consumption.
- 2.7.2 Contractor shall make necessary arrangements for onward distribution of construction power taking due care of surrounding construction activities like movement of cranes & vehicles, civil work, fabrication/construction/assembly/erection etc and safety of personnel. It may become necessary to relocate some of the installations to facilitate work by other agencies or by him.
- 2.7.3 It shall be the responsibility of the Contractor to provide, maintain the complete installation on the load side of the supply with due regard to the safety requirements at site. All cabling and installations shall comply in all respects with the appropriate statutory requirements. The installation and maintenance of this shall be done by licensed and experienced electrician.
- 2.7.4 While reasonable efforts will be made to ensure continuous electric power supply, interruptions cannot be ruled out and no claim from the Contractor shall be entertained on this account such as idle labor, extension of time etc. The Contractor shall adjust his working shift accordingly and deploy additional manpower, if necessary, so as to achieve the target.
- 2.7.5 Contractor shall be well equipped with back-up power supply arrangement like DG set and diesel operated welding machine etc to tackle situations arising due to failure of supplied power, so as to ensure continuity and completion of critical processes that are underway at the time of power failure or important activities planned in immediate future.
- 2.7.6 BHEL is not responsible for any loss or damage to the Contractor's equipment as a result of variations in voltage or frequency or interruptions in power supply.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

- 2.7.7 Contractor is advised to maintain the calibrated energy measuring instruments and use their system as efficiently as possible to maintain the HT side input energy meter reading and LT side outgoing energy meter reading to sub-contractors as equal.
- 2.7.8 The bidder will have to Procure & install General mobile illumination system during construction right from start of his work. This system will include temporary pole lighting, portable lighting towers with DG back-up, within the quoted price. The illumination should be such that minimum illumination requirement as specified by Indian standards for general illumination is maintained.

General:

If any other voltage level (other than normally available) is required, the same shall be arranged by the contractor from power supply as above. Contractor will have to provide at his own cost necessary calibrated energy meters (tamper proof, suitably housed in a weather proof box with lock & key arrangement) at point of power supply along with calibration certificate from authorized/ accredited agency for working out the power consumption. In case of recalibration required for any reason the necessary charges including replacement by calibrated meters is to be borne by the contractor. Supply of electricity shall be governed by Indian Electricity Act and Installation Rules and other Rules and Regulation as applicable. The contractor shall ensure usage of electricity in an efficient manner and the same may be audited by BHEL time to time. In case of any major deviation from normally accepted norms is observed, BHEL will reserve the right to impose penalty as deemed fit for such cases.

2.8 Construction water (Provided by BHEL free of cost):

Construction water will be provided free of cost at one point near the plant boundary. Bidder has to make arrangement of further distribution of water at his own cost. No extra payment shall be made under this account. The agency should also construct a sump of suitable size for storage of construction water as per their site requirement for use in batching plant and construction purposes.

2.9 Field Quality Assurance:

The contractor shall be responsible for day-to-day quality checks of concrete and other building materials during the progress of work. All quality records and log sheets shall be maintained as per the requirement of BHEL/MSPGCL and as per field quality plan approved by BHEL/MSPGCL.

2.10 Handling of Materials issued by BHEL free of cost:

- 2.10.1 Materials shall be issued by BHEL based on the weighment basis/linear measurements & sectional weight. However, on specific request of the contractor **“as a special case to expedite the job”** the consignment received at BHEL stores can directly be diverted to the work site following issuance procedure of BHEL. Such direct issues shall be as per the Challan/dispatch

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

document/LR received with the consignment. In such cases, Contractor shall do unloading of materials from trucks/lorry at their own cost.

- 2.10.2 All materials issued by BHEL shall be stacked, stored above ground level by use of concrete or wooden sleepers. No materials shall remain on ground at any time. All concrete or wooden sleepers required for stacking the materials shall be arranged by contractor (successful bidder of this package) at his own cost within the quoted rates. All other equipments like winches, D-Shackles, slings of various sizes, max puller, pulley blocks, jacks, trucks, trailers etc. Required for such handling of steel from BHEL stores/storage yard etc. Shall be arranged by contractor within quoted/accepted rates.
- 2.10.3 The contractor shall take delivery of the materials from the designated place within the project premises at his own cost and store the same at his stores as per standard norms. Open land for such purposes shall be provided by BHEL on free of cost basis. Temporary barbed wire fencing of the open storage yard is to be done by the contractor and is included under the scope of his work. Contractor shall also remove grass, bushes, trees etc wherever required off the land provided to him and shall make proper continuous up keeping of the open yard /land by removing grass, bushes trees etc and same is included under the scope of his work & No extra payment shall be made to the contractor in this regard. The bidder shall make complete arrangement of necessary security personnel to safeguard all such materials in his custody. Materials issued will be used only for construction of permanent works. The contractor shall take care of material issued by BHEL and shall protect the same from theft, damage and weathering. Excessive rusting of steel in custody of agency/contractor must be avoided. In case, due to any cause attributable to the contractor, such rusting of steel occurs rendering the same unusable, then such quantity of steel shall be recovered from the interim payment at the penal rate specified in the tender.

2.11 Cement (Issued by BHEL free of Cost):

- 2.11.1 Cement as received from the manufacturer/ stockiest will be issued free of cost to the contractor. cement shall be issued normally through bulkers and emptied in cement silos of batching plant. Necessary assistance shall be provided by contractor.
- 2.11.2 Contractor to note that batching plant of capacity 30 Cum per Hour / 60 Cum per Hour being established at site shall have minimum two cement silos of 100 MT/ 150 MT capacities each respectively. The number of silos shall be increased based on the site requirement.
- 2.11.3 On advance request of the bidder, the cement shall be supplied in 50kg tamper proof sealed Bags for other than RCC works like masonry, flooring works etc.
- 2.11.4 The contractor shall submit to the engineer, a statement indicating estimated quantity of cement required during a quarter, at least two months in advance of the quarter. In addition, the contractor shall also furnish the estimated

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

requirement of cement during a month by the third week of the previous month indicating his requirement.

- 2.11.5 The theoretical weight of each bag of cement for issued purposes will be considered as 50 kg, the contractor shall be accountable for the cement issued to the contractor on this notional weight only. No claim whatsoever will be entertained because of difference between theoretical and actual weight of the bags of cement.
- 2.11.6 The empty cement bags duly accounted for against issue shall be the contractor's property and the same shall be disposed as per statutory regulation prevailing in the project.
- 2.11.7 The contractor shall satisfy himself of the quality and quantity of supplied cement at the time of taking delivery from BHEL stores. No claims whatsoever will be entertained by BHEL because of quality or quantity after the materials are taken by the contractor from BHEL stores.
- 2.11.8 Bidder is responsible for unloading the cement as soon as the arrival of cement, either in silo, if received in bulker or in the weather proof cement storage sheds, if received in bags. Bagged cement shall be stored in a weatherproof sheds having dense impervious bituminous or concrete floors which shall be kept swept clean at all times. The storage arrangements shall be fully completed and approved by the owner before any cement is delivered to site. The construction of cement storage sheds as per the requirement of BHEL, unloading of cement bags, stacking properly in the storage sheds, removal of the sheds after the completion of the work is in the scope of bidder. Though the cement is unloaded directly at the contractor storage shed, it will be deemed to be considered that the cement was issued from BHEL stores. Necessary documents are to be submitted by the contractor to the BHEL stores for having received cement.
- 2.11.9 Bidder is responsible for sampling and testing of cement as per Indian Standard / Specification / approved quality plan in the testing laboratory established by the bidder.
- 2.11.10 Bidder is responsible for carrying out design mix as per IS 456/10262 latest revision and specification, using the cement provided by BHEL and submit the design mix proportions for the approval of BHEL / MSPGCL. The design / trial mix shall be carried out time to time on change of brand / type of cement supplied by BHEL and suitable adjustments on the quantity of ingredients (sand, aggregates, admixture) of the concrete to get the required workability and durability, shall be the responsibility of the bidder without any extra cost to BHEL.
- 2.11.11 One month shall be limit for the maximum quantity of BHEL issue materials that would be with the contractor at any point of time when work is in progress (excluding what has already been incorporated in the works).

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

2.12 Steel (Issued by BHEL free of Cost):

- 2.12.1 The structural and reinforcement steel shall be issued to the contractor on weight basis. **Earthing Rod/Round Bar, MS/GI Flats, MS Rails for crane, etc. as applicable based on BOQ description shall also be issued to the contractor on weight basis.**
- 2.12.2 All the steel (as applicable) issued by BHEL shall be properly accounted for. The total quantity of steel required for the work will be calculated from the approved Bar Bending schedule, approved laps, chairs and lugs etc. The measurement for payment as well as for accounting shall be based on the sectional weights as indicated in the following IS/BS/EN specifications.
- 2.12.3 The steel issued to the contractor shall be mainly in standard length and sections as received from the supplier. However, the contractor shall be bound to accept the steel in length as available in the project stores, no claims for extra payment because of issue of non-standard length will be entertained.
- 2.12.4 The contractor shall satisfy himself of the quality and quantity of the materials at the time of taking delivery from BHEL stores. No claims whatsoever will be entertained by BHEL because of quality or quantity after the materials are taken by the contractor from BHEL stores.
- 2.12.5 The contractor shall submit to BHEL, a statement indicating estimated quantity of steel required during a quarter. In addition, the contractor shall also furnish the estimated requirement of steel during a month by the third week of the previous month indicating his requirement.
- 2.12.6 One month shall be limit for the maximum quantity of BHEL issue materials that would be with the contractor at any point of time when work is in progress (excluding what has already been incorporated in the works).
- 2.12.7 The contractor must note that steel required for the contractor's enabling job like store/ site office/batching plant/temporary works etc. shall be arranged by the contractor at his own cost.

2.13 Return of Materials issued by BHEL free of cost:

- 2.13.1 **Return of Cement:** Sealed cement bags remaining unused and in perfectly good condition at the time of completion or termination of the contract shall be returned promptly, (within 15 days from assessment) if BHEL/ engineer is satisfied of the physical condition of the cement. Return of such cement to the project stores / place as identified within the project area by engineer/ BHEL will not be entitled to handling and incidental charges. Surplus sealed and good conditioned cement bags will be taken back on weight basis.

Cement that has been unloaded in silo will not be taken back by BHEL. Sweep cement will not be taken back by BHEL.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

- 2.13.2 **Return of Structural and Reinforcement Steel including Scrap:** All surplus steel and all wastage materials will be taken back on weightment basis. Surplus, unused and untampered steel shall be sorted section-wise and returned separately at a place directed by BHEL/Engineer within the project area. All wastage/ scrap (including melting scrap, wastage, and unusable scrap) shall be promptly returned to the stores and a receipt obtained for material accounting purposes. Return of such material will not be entitled to any transportation and incidental charge.

2.14 Scrap and Serviceable Materials:

- 2.14.1 All Structural steel (Rolled Section, MS/ GI Flats and MS Rails) of length above 2 metre except MS/SS Plates shall be considered as serviceable materials provided the materials is in good and acceptable condition. Structural steel in length less than 2 metre shall be treated as scrap.
- 2.14.2 MS/SS Plates having both sides greater than 1 metre or if any side is less than 1 metre but greater than 0.5 metre and the total area is equal or greater than 2 Sqm shall be considered as serviceable.
- 2.14.3 All reinforcement steel and earthing rod/round bar measuring 3 metre and above in length shall be treated as serviceable material provided they are in good acceptable condition otherwise shall be treated as scrap.

2.15 Consumption and wastage of materials issued by BHEL free of cost:

2.15.1 **Cement Consumption:**

The theoretical consumption of cement shall be based on the following:

- (a) For design mix concrete as per approved design mix.
- (b) For nominal mix concrete work, as per minimum cement as specified or as approved by engineer-in-charge.
- (c) For item of works, where volume mix is permitted in writing by the BHEL, for masonry works, plaster other miscellaneous items, the cement consumption shall be governed by the “Statement of cement consumption” attached to the Delhi Schedule of Rates CPWD DSR Latest Revision unless otherwise specified in the specifications or the drawing of contract or mutually agreed by engineer-in-charge and the contractor.
- (d) Actual consumption = Issue – Surplus/ unused quantity of cement returned in good condition by the contractor to store.

2.15.2 **Cement Wastage:**

- (a) **Allowable wastage:** One and half percent (+1.5%) of theoretical consumption of cement unless specified otherwise in the technical specification.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

- (b) For cement issued by BHEL to the contractor free of cost, and which is not accounted for by the contractor to BHEL, then recovery for such material shall be affected at penal rates.

| Sl. No. | Cement consumption | Basis of issue & penal recovery |
|---------|--|---------------------------------|
| 1 | Theoretical consumption (without considering any wastage or loss). | Free |
| 2 | Actual consumption being Limited to one and half percent (+1.5%) of aforesaid theoretical consumption towards allowable wastage. | Free |
| 3 | Actual consumption beyond one and half percent (+1.5%) of Sl. No. (1) above. | Penal rate |

2.15.3 Steel Consumption:

The theoretical consumption of various sections and/or diameter of reinforcement and earthing rod steel shall be based on approved construction drawing and bar bending schedule. Weight shall be calculated considering the sectional weights as per Indian standards. No extra cost shall be payable to the contractor for any deviation in weights for the different procedures adopted for issue and calculation of the theoretical consumption including rolling tolerances.

- Actual consumption = Issue – Surplus.
- Surplus = Un-tampered, unused quantity of steel returned by the contractor including serviceable material to BHEL store along-with relevant documents.
- Wastage = Actual consumption – Theoretical consumption.

2.15.4 Steel Wastage:

- (a) **Allowable Wastage of Reinforcement steel and Earthing Rod/Round Bar:** Three percent (+3%) of the theoretical consumption shall be considered as allowable wastage. Invisible wastage (Maximum limit to 0.5%), if any, shall be considered to be included in the specified 3% allowable wastage.
- (b) **Allowable Wastage of Structural Steel (Rolled Section, MS/SS Plates, MS/GI Flats and MS Rails):** Four percent (+4%) of the theoretical consumption shall be considered as allowable wastage. Invisible wastage (Maximum limit to 0.5%), if any, shall be considered to be included in the specified 4% allowable wastage.
- (c) For steel issued by BHEL to the contractor free of cost, and which is not accounted for by the contractor to BHEL, then recovery for such material shall be affected at penal rates.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

| Sl. no. | Steel | Basis of issue & penal recovery |
|---------|---|---------------------------------|
| 1 | Theoretical consumption (without considering wastage and scrap or loss) | Free |
| 2 | Wastage limited to plus Three percent (+3%) for reinforcement steel and earthing rod/round bar and plus Four percent (+4%) for structural steel of aforesaid theoretical consumption (1) towards allowable wastage. | Free |
| 3 | Wastage beyond Three percent (+3%) for reinforcement steel and earthing rod/round bar and plus Four percent (+4%) for structural steel of the theoretical consumption as per Sl. No. (1) above. | Penal rate |

2.16 Reconciliation of materials issued by BHEL free of cost:

- 2.16.1 The contractor shall submit a reconciliation statement of cement and steel issued to the contractor with each RA Bill.
- 2.16.2 At the time of submission of bills, the contractor shall properly account for the material issued to him as specified herein to the satisfaction of BHEL certifying that the balance material is available in the contractor custody at site.
- 2.16.3 At the time of submission of bills, if it is noticed by BHEL that the wastage is high and calls recovery at the penal rate, then, BHEL will proceed for recovery for the excess wastage as per penal recovery rates as specified.
- 2.16.4 The reference drawings for actual material consumption to be used for the purpose of reconciliation shall be drawings prepared by the BHEL and drawings approved by BHEL for fabrication works and such other drawings approved by BHEL. This shall also include the bar bending schedule prepared by the contractor and approved by BHEL.
- 2.16.5 **General Notes:**
- (a) BHEL reserves the right to recover from the contractor any loss arising out of damage/ theft or any other causes or during verification/stacking or at any time under the custody of the contractor.
 - (b) The contractor shall in no case be entitled for any compensation on account of any delay in supply or non-supply thereof for all or any such materials. However, in case of non-availability of any specific section(s) which delays the completion of work, such cases shall be recorded separately in monthly planning format (F14) and shall be considered for time extension of contract.
 - (c) Contractor will have to make his own arrangement at his own cost for procurement of any other materials except as mentioned above, as required for the works and of such quality as acceptable to BHEL.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

- (d) The contractor shall maintain proper store account for all the BHEL issued materials and shall give Three (03) copies of monthly-computerized reconciliation statement of such account showing total receipt, consumption and balance at site to the BHEL. BHEL Engineer's certification for the reconciliation of steel shall be final. The detailed reconciliation (diameter/section wise or as required) shall be done at least once in three months (03) or before submission of final bill which comes earlier.
- (e) Contractor shall also carryout in complete association with BHEL, the material management functions and execution like day-to-day update of materials, issued to contractor, accounting for surplus/scrap material returned etc. These functions shall also be carried out through computerized system utilizing suitable software. Contractor shall engage experienced software personnel to associate on dedicated basis for efficient discharge of the same in time.
- (f) The contractor shall solely be responsible for the safety & security of material after it is handed over and issued to contractor by the BHEL.
- (g) BHEL issued materials, shall not be under any circumstances whatsoever, and shall be taken out of the project site unless otherwise permitted by BHEL for outside job.

2.17 Recovery of Materials (Penal Rates):

If wastage exceeds the specified limit, the recovery of excess wastage shall be made from monthly RA Bills as per following penal rates (excluding GST):

| Sl. No. | Materials | Penal rate (Rs) |
|---------|---|-------------------|
| 1 | Cement | 6,500/- per MT |
| 2 | Reinforcement Steel, Earthing Rod/Round Bar | 65,000/- per MT |
| 3 | Structural Steel (Rolled Section, MS Plates, MS/GI Flats, etc.) | 75,000/- per MT |
| 4 | SS Plates | 3,00,000/- per MT |
| 5 | MS Rails | 85,000/- per MT |

2.18 Procurement and Testing of Materials by Contractor:

Material required for the entire job (other than issued by BHEL as explained above) like sand, aggregates, windows, doors, ventilators, rolling shutter, sanitary fixtures, painting & finishing material, electrical fittings and wiring material and all other material required for the completion of entire scope have to be arranged by the contractor, except those specifically indicated as BHEL scope of supply. BHEL reserves the right to reject any material not found satisfactory. Rates quoted shall be inclusive of all such contingencies and no additional payment shall be made on this account. For this purpose, sample shall be collected at site in presence of BHEL/MSPGCL representative.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: Scope of Works and Technical Specifications

2.19 **Bidders are requested to specifically note the following:**

*Bidders are requested to have **pre-bid visit/ inspection of site** to make them fully acquainted with the site situation & nature of job. No claim shall be entertained at later date on account of non-familiarization of site conditions.*

Bidders may fix up their site visit in consultation with below mentioned contact person:

| | |
|--|--|
| Sh P. V. Shah Sr. Manager, BHEL Bhusawal TPS, Bhusawal Email: pvshah@bhel.in Ph no: +919727751719 | Sh R. P. Das PSWR Nagpur Email: rpdas@bhel.in Ph no: +918806007760 |
| Sh Mahesh Kumar Manker Dy. Manager, BHEL Bhusawal TPS, Bhusawal Email: mankerm@bhel.in Ph no: +917028014326 | Sh Anand Kumar PSWR Nagpur Email: aanand@bhel.in Ph no: +917387356299 |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: Facilities in the scope of Contractor/BHEL

| Sl. No | Description PART I | Scope | | Remarks |
|--------------|--|-------|--------|---|
| | | BHEL | Bidder | |
| 3.1 | Establishment: | | | |
| 3.1.1 | For Construction Purpose: | | | |
| a | Open space for office (as per availability) | Yes | | Location will be finalized after joint survey with owner |
| b | Open space for storage (as per availability) | Yes | | Location will be finalized after joint survey with owner |
| c | Construction of bidder's office, canteen and storage building including supply of materials and other services | | Yes | |
| d | Bidder's all office equipments, office / store / canteen consumables | | Yes | |
| e | Canteen facilities for the bidder's staff, supervisors and engineers etc | | Yes | |
| f | Fire fighting equipments like buckets, extinguishers etc | | Yes | |
| g | Fencing of storage area, office, canteen etc of the bidder | | Yes | |
| 3.1.2 | For living purpose of the bidder: | | | |
| a | Open space for labour colony (as per availability) | | Yes | Contractor has to make his own arrangements shelter and transportation of labours as per their requirement. |
| b | Labour Colony with internal roads, sanitation, complying with statutory requirements | | Yes | Construction Plan shall be approved by BHEL |
| 3.2 | Electricity: | | | |
| 3.2.1 | Electricity for construction purposes 3 Phase 415/440 V | | | |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: Facilities in the scope of Contractor/BHEL

| Sl. No | Description PART I | Scope | | Remarks |
|--------------|--|-------|--------|--|
| | | BHEL | Bidder | |
| a | Single point source | Yes | | Free of cost at one point near the site at a distance of approx. 500 meter. Further distribution and Metering is in scope of bidder. |
| b | Further distribution including all materials, Energy Meter, Protection devices and its service | | Yes | |
| c | Duties and deposits including statutory clearances if applicable | | Yes | |
| 3.2.2 | Electricity for office, stores, canteen etc. of the bidder. | | | |
| a | Single point source | Yes | | Single point as above for construction purpose, no separate point shall be given. |
| b | Further distribution including all materials, Energy Meter, Protection devices and its service | | Yes | |
| c | Duties and deposits including statutory clearances if applicable | | Yes | |
| 3.2.3 | Electricity for living accommodation of the bidder's staff, engineers, supervisors etc | | | |
| a | Single point source | | Yes | Single point as above for construction purpose, no separate point shall be given. |
| b | Further distribution including all materials, Energy Meter, Protection devices and its service | | Yes | |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: Facilities in the scope of Contractor/BHEL

| Sl. No | Description PART I | Scope | | Remarks |
|--------------|---|-------|--------|---|
| | | BHEL | Bidder | |
| c | Duties and deposits including statutory clearances if applicable | | Yes | |
| 3.3 | Water Supply: | | | |
| 3.3.1 | For construction purposes: (to be specified whether chargeable or free) | | | |
| a | Making the water available at single point | Yes | | Free of cost at one point near the plant boundary. Further distribution and Metering is in scope of bidder. |
| b | Further distribution as per the requirement of work including supply of materials and execution | | Yes | |
| 3.3.2 | Water supply for bidder's office, stores, canteen etc. | | | |
| a | Making the water available at single point | | Yes | Single point as above for construction purpose, no separate point shall be given |
| b | Further distribution as per the requirement of work including supply of materials and execution | | Yes | Contractor has to make his own arrangements for distribution. |
| 3.3.3 | Water supply for Living Purpose | | | |
| a | Making the water available at single point | | Yes | Single point as above for construction purpose, no separate point shall be given |
| b | Further distribution as per the requirement of work including supply of materials and execution | | Yes | Contractor has to make his own arrangements for distribution. |
| 3.4 | Lighting | | | |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: Facilities in the scope of Contractor/BHEL

| Sl. No | Description PART I | Scope | | Remarks |
|------------|---|-------|--------|---------|
| | | BHEL | Bidder | |
| a | For construction work (supply of all the necessary materials) 1. At office/storage area 2. At the preassembly area 3. At the construction site /area | | Yes | |
| b | For construction work (execution of the lighting work/ arrangements) 1. At office/storage area 2. At the preassembly area 3 At the construction site /area | | Yes | |
| c | Providing the necessary consumables like bulbs, switches, etc during the course of project work | | Yes | |
| d | Lighting for the living purposes of the bidder at the colony / quarters | | Yes | |
| 3.5 | Communication facilities for site operations of the bidder | | | |
| a | Téléphone, fax, internet, intranet, e-mail etc | | Yes | |
| 3.6 | Compressed air wherever required for the work | | Yes | |
| 3.7 | Demobilization of all the above facilities | | Yes | |
| 3.8 | Transportation | | | |
| a | For site personnel of the bidder | | Yes | |
| b | For bidder's equipments and consumables (T&P, Consumables etc) | | Yes | |

| Sl. No | Description PART II | Scope / to be taken care by | | Remarks |
|------------|---|-----------------------------|--------|---------|
| | | BHEL | Bidder | |
| 3.9 | Erection Facilities | | | |
| 3.9.1 | Engineering works for construction: | | | |
| a | Providing the erection/constructions drawings for all the equipments covered under this scope | Yes | | |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: Facilities in the scope of Contractor/BHEL

| Sl. No | Description PART II | Scope / to be taken care by | | Remarks |
|------------|--|-----------------------------|--------|---|
| | | BHEL | Bidder | |
| 3.9 | Erection Facilities | | | |
| b | Drawings for construction methods | | Yes | In consultation with BHEL |
| c | As-built drawings where ever deviations observed and executed and also based on the decisions taken at site | | Yes | Changes are to be marked in drawing & handover to BHEL on completion of work. |
| d | Shipping lists etc for reference and planning the activities | | | Not Applicable |
| e | Preparation of site erection schedules and other input requirements | Yes | Yes | In consultation with BHEL |
| f | Review of performance and revision of site erection schedules in order to achieve the end dates and other commitments | Yes | Yes | In consultation with BHEL |
| g | Weekly erection schedules based on SI No. e | | Yes | In consultation with BHEL |
| h | Daily erection / work plan based on SI No. g | | Yes | In consultation with BHEL |
| i | Periodic visit of the senior official of the bidder to site to review the progress so that works is completed as per schedule. It is suggested this review by the senior official of the bidder should be done once in every two months. | | Yes | |
| j | Preparation of preassembly bay | | Yes | |
| k | Laying of racks for gantry crane if provided by BHEL or brought by the contractor /bidder himself | | Yes | |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – IV: T&Ps AND MME TO BE DEPLOYED BY CONTRACTOR

4.0 **Tools and Plants:**

Nos. of T&Ps to be deployed at site shall be decided w.r.t. monthly plan and review format (F-14) based on site requirement. Below given Nos are tentative for planning purposes by the bidder.

| Sl. No. | Description of T&P | Quantity |
|----------|---|--|
| A | Major T&Ps for Civil Works | |
| A.1 | Concrete Batching Plant (30 Cum/Hr.) with two Nos. of Silos of 100 MT capacity each. | 01 No. Additional 01 No. as per requirement |
| A.2 | Concrete Batching Plant (60 Cum/Hr.) with two Nos. of Silos of 150 MT capacity each. | 01 No. |
| A.3 | Concrete Transit Mixer | 08 Nos |
| A.4 | Concrete Mixer | As per Requirement |
| A.5 | Concrete Pump (60 Cum/Hr. min capacity & lift 70M) | 02 Nos. |
| A.6 | Concrete Pump of Suitable Capacity with Sufficient lift in order to pour concrete at roof of Bunker and Transfer Points | 01 No. as per requirement |
| A.7 | Hydraulic Excavator /Poclain | 06 Nos. |
| A.8 | JCB | 03 Nos. |
| A.9 | Dumper | 18 Nos. |
| A.10 | Concrete Boom placer min. 35m long | 01 No. |
| A.11 | Engineered Formwork System (for TG Deck) | 01 No. |
| B | Major T&Ps for Structural Works | |
| B.1 | 75 MT Capacity Crawler Crane | 02 Nos Additional 01 No. as per requirement |
| B.2 | 45 MT Capacity Tyre Mounted Crane | 01 No. Additional 01 No. as per requirement |
| B.3 | 40 MT Capacity Gantry Crane with 250m length rails for movement | 01 No. |
| C | Other T&Ps for Civil & Structural Works | |
| C.1 | Tower Crane for Buildings | As per Requirement |
| C.2 | Electrical Winch (of required capacity) | As per Requirement |
| C.3 | Builders Hoist (Electrically Operated) | As per Requirement |
| C.4 | Vibrators (electrical/diesel) | As per Requirement |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – IV: T&Ps AND MME TO BE DEPLOYED BY CONTRACTOR

| | | |
|------|--|--------------------------|
| C.5 | Air Compressor/Air blower | As per Requirement |
| C.6 | Concrete breaker (Hilti or equivalent) | As per Requirement |
| C.7 | Jack Hammer | As per Requirement |
| C.8 | Welding Machine with all accessories | As per Requirement |
| C.9 | Self-priming Dewatering pump of various capacity (Diesel/Electric) From 2 HP to 7.5 HP | As per Requirement |
| C.10 | Curing / dewatering pump – 1.5 / 2 HP | As per Requirement |
| C.11 | <ul style="list-style-type: none"> • Ply Shuttering board with adequate supporting structure – (Old steel shuttering plates will not be allowed). • Steel shuttering (fare face) | Lot (As per requirement) |
| C.12 | Hydra crane (12/14 MT Capacity) | As per Requirement |
| C.13 | Trailer (20MT Capacity) | As per Requirement |
| C.14 | Tractor mounted grader/ loader | As per Requirement |
| C.15 | Tractor with Trolley | As per Requirement |
| C.16 | Pipe Scaffolding, Clamps / Swivel Couplers (One/Two Way), Props, Jacks, Screw Heads, MS Pipes, Wooden Battens, Planks, Bullies, H Frames, Tie Rods with Nuts, Adjustable Achro Span (Considering Individual Areas) | As per requirement |
| C.17 | Reinforcement bending machine | As per Requirement |
| C.18 | Reinforcement cutting machine | As per Requirement |
| C.19 | MS scaffolding pipe with matching Couplers | As per requirement |
| C.20 | Plate compactor | As per Requirement |
| C.21 | Earth Compactor- 5 MT Capacity | As per Requirement |
| C.22 | Earth Compactor – 3 MT Capacity | As per Requirement |
| C.23 | Total Station | 03 Nos. |
| C.24 | Auto level & staff | As per Requirement |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – IV: T&Ps AND MME TO BE DEPLOYED BY CONTRACTOR

| | | |
|------|--|--------------------|
| C.25 | Road roller/Vibro roller | As per Requirement |
| C.26 | Water Tanker | As per Requirement |
| C.27 | All Equipment for area Lightning like halogen bulbs and Portable light Towers etc. | As per requirement |
| C.28 | Computer with printing/photocopy & CD writing facility | As per Requirement |
| C.29 | Man lift crane of Minimum 20m reach | As per requirement |
| C.30 | DG Set of 125 KVA Capacity | As per Requirement |

4.1 **Measuring and Monitoring Device (MMD):**

To be finalized as per site requirement.

4.2 **Computer Infrastructure for exclusive use of BHEL:**

The successful bidder(s) will have to establish computerized project management system along with **three supervisors (Diploma in Civil Engineering)** with sufficient computer knowledge (knowledge of MS office) and the following are the minimum requirements of the system:

- (a) The bidder will have to **install 3 Nos. of PCs** (multimedia PC work station Core i3/i5, 1 GHZ or above, 320 GB HDD, 4 GB RAM, 100 MBPS LAN card of DELL/HP/ASUS or equivalent make with window 10 O/S with required accessories like mouse, keyboard, UPS and required software like MS Office 2010 Professional, AutoCAD 2011, ADOBE PDF CREATOR (version 8.0) with one laser jet printer compatible for A4 and A3 size printing (ink/ cartridge for which to be supplied as and when required, (the consumption may be assumed as 1 cartridge per month) with power backup at places, as per instruction of BHEL.
- (b) These computers/ printers along with three supervisors shall remain contractor's property/ownership for all legal/technical purposes. However, contractor will be allowed to take out the same after completion of the site works. However, the computer/printer along with technical supervisor shall remain at BHEL offices.
- (c) The contractor's technical supervisor shall provide data/ information etc. in prescribed formats for periodical updating of the progress reports, Billing, daily progress report updating of network pertaining to the contractor's scope of work etc.
- (d) This facility has to be provided from 3rd month from LOI date till completion of site works or as decided by BHEL. If contractor fails to provide computer/ printer as per requirement, for a continuous period of fifteen days or more, BHEL shall have the right to purchase it at risk and cost of bidder.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – IV: T&Ps AND MME TO BE DEPLOYED BY CONTRACTOR

- (e) In the event of the contract period getting extended beyond the stipulated time for reasons not attributable to the bidder, the bidder will be reimbursed at Rs. 10,000/- per month for three computers with printer facility **including three supervisors**, if the services of computer and printer are being used by BHEL.

4.3 **Establishing and Maintaining of Field Laboratory:**

The Bidder shall establish and maintain a field laboratory on the site and this laboratory shall be available at all time for testing.

- (a) The laboratory must have qualified technicians to carry out all tests and must be adequately equipped to ensure that all necessary testing work can be carried out in compliance with the standards.
- (b) Field and laboratory testing procedures for materials follow Indian Standard Specifications with necessary equipment shall be conducted as per approved field quality plan.

Note:

T&Ps shown in the above mentioned list is suggestive requirement considering parallel working in Main plant area and BOP including FGD, SCR and others related to revised emission norms. However, mobilization schedule as mutually agreed at site for major T&Ps, have to be adhered to. Numbers/time of requirement will be reviewed from time to time at site and contractor will provide required T&Ps/equipment to ensure completion of entire work within schedule/target date of completion without any additional financial implication to BHEL. Vendor will give advance intimation & certification regarding capacity etc. prior to dispatch of heavy equipment. Also on completion of the respective activity, demobilization of T&Ps in total or in part can be done with the due approval of engineer in charge. Retaining of the T&Ps during the contract period will be mutually agreed in line with construction requirement. In the event of non-mobilization of any T&P by the successful bidder and as a result progress of work suffered, BHEL reserves the right to deduct suitable amount from the dues of the bidder, with assigning reasons thereof.

Please note special arrangement has to be done for TG Raft & TG Deck casting, bidder has to arrange and Tie up with other agency for T&P and resources in such a manner that casting is done as per Engineer-in charge direction.

It is to be noted that structural staircase in Main Power house/other Buildings will not be available for approach and movement for certain period, till structural staircase is being made ready, Bidder has to arrange one-man lift crane of Suitable capacity and two Ready-made Pre-Engineered cup lock stair case of height 40m for construction activity at its own cost.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – V: T&Ps AND MME TO BE DEPLOYED BY BHEL ON SHARING BASIS

- 5.1** BHEL will provide suitable higher capacity cranes above 75MT capacity to the contractor as per the requirement at the discretion of BHEL on free of hire charges on shareable basis. The cranes of 75MT and below capacities is in the scope of bidder.
- 5.2** Besides the T&P mentioned above, which is being made available to the contractor on free of hire charges, any additional crane and other T&P which may be required for successful and timely execution of the work covered within the scope of this tender shall be arranged and provided at site by the contractor at his cost. In case if the contractor fails to provide such equipment's, BHEL will arrange for the same and the cost will be recovered from the contractor's bill with BHEL overheads, as applicable from time to time which may vary even during contract period.
- 5.3** BHEL's Crane is only for erection purpose and shall not be available for material handling or transportation purpose. Contractor shall make their own arrangements for material transportation to erection site.
- 5.4** BHEL may provide either BHEL owned cranes or hired cranes with operator at the discretion of BHEL. However, fuel shall be arranged by the contractor at his cost.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VI: TIME SCHEDULE

6.0 **Time Schedule and Mobilization:**

6.1 **Initial Mobilization and Time Schedule:**

After issue of LOI (though Fax/courier/email) the contractor shall report to the Construction Manager/Site In-Charge of BHEL at site within two weeks and make a MOM (Minutes of meeting) for mobilization of manpower, T&Ps, date of start of work and detailed completion program.

The contractor has to subsequently augment his resources in such a manner that the entire works are completed within the contract period of **40 (Forty) months** from the date of start of work in a manner required by BHEL to match with the project schedule.

Date of Start of earthwork (excavation or stripping or filling) shall be considered as START OF WORK

6.2 **Schedule of Completion:**

The entire work under the scope of this contract shall be carried out in such a manner that the following listed major milestones are achieved as per completion schedule given against each activity & release for erection by other agency.

| Sl. No. | Activity | Schedule of completion from start of work |
|------------------------|--|---|
| Main Plant Area | | |
| 1 | Leveling, Grading and Approach Road for entire plant in order to start civil fronts for progressive execution | Progressively up to 10 th Month |
| 2 | (I) Boiler Foundation including Lift Foundation, Bunker N-Row (LHS & RHS) Foundations and Bottom Ash Hopper Foundation up to Ground Level. (II) PA & FD Fan Foundations up to Ground Level including Fan Handling Structure Foundations. (III) Duct Supporting Structure Foundations, TPs Foundations, Trestles Foundations, etc. between Boiler & ESP (IV) Backfilling in order to Handing Over for erection | 7 th Month |
| 3 | Bunker M-Row (LHS & RHS) Foundations, One Side all Four Mill Foundations and Other Side Two Mill Foundations complete including Balance Two Mill Foundations up to Ground Level | Handing Over Progressively from 8 th to 10 th Month |
| 4 | ESP Foundation with Backfilling in order to handing over for ESP Erection | Handing Over Progressively from 5 th to 6 th Month |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VI: TIME SCHEDULE

| Sl. No. | Activity | Schedule of completion from start of work |
|-----------------|---|--|
| 5 | ID Fan Foundations including Duct Supporting Structure Foundations | Handing Over Progressively from 8 th to 9 th Month |
| 6 | Power House Foundations and TG Raft with Backfilling in order to start Structural Erection | Erection Start Progressively from 6 th to 8 th Month |
| 7 | TG Deck Casting | 12 th Month |
| 8 | Operating Floor at 17m with Oil Canal including stairs, roof deck sheeting, side cladding, etc. in order to handing over for TG Erection | 16 th Month |
| 9 | Power House AB Bay – Roof Slab including Parapet Wall | Progressively from 16 th to 18 th Month |
| 10 | Power House BC Bay – RCC Floor Slabs of all Floors above Ground Level | Progressively from 18 th to 21 th Month |
| 11 | Power House AB Bay – RCC Floor Slabs of all Floors above Ground Level | Progressively from 20 th to 23 th Month |
| 12 | Power House Ground Floor - Equipment Foundations, AC Plant, Inert Gas, etc. including Paving/ Grade Slab, Cable/ Pipe Trench and Drains | Progressively from 22 th to 25 th Month |
| 13 | Power House – Architectural works of Various Rooms/ Different Floors | Handing Over Progressively from 20 th to 26 th Month |
| 14 | Bunker Bay – Feeder Floor, Tripper Floor and Roof Slab with Parapet Wall including Side Metal Cladding in order to Handing Over for Erection | Progressively from 20 th to 26 th Month |
| 15 | (I) Transformer Foundations (GT, ST, UT, UAT, etc.) with Rail Track and Fire Wall (II) Bus Duct Foundation, Oil Pit and Cable Trench/Duct (III) DG Building and Air Washer Room | Handing Over Progressively from 20 th to 23 th Month |
| BOP Area | | |
| A | Water System: | |
| A.1 | Raw Water & Fire Water Storage Tank and Pump House | Handing Over Progressive from 15 th to 18 th Month |
| A.2 | Pre-Treatment Plant (Clarifier, Aerator, Sludge pit, Sludge Thickener, Chemical House, etc.) | Handing Over Progressive from 14 th to 18 th Month |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VI: TIME SCHEDULE

| Sl. No. | Activity | Schedule of completion from start of work |
|----------|--|---|
| A.3 | DM Plant (Building, Neutralization Pit and Misc. foundation) | Handing Over Progressive from 13 th to 18 th Month |
| A.4 | DM & CS Tank and Pump House including Misc. Foundation | 15 th Month |
| A.5 | CW/ACW Pump House, Fore bay and Connecting Channel | Handing Over Progressive from 17 th to 21 th Month |
| A.6 | Effluent Treatment Plant | 25 th Month |
| A.7 | Sewage Treatment Plant | 26 th Month |
| A.8 | CW Treatment Plant | 29 th Month |
| A.9 | CW Side Stream System | 27 th Month |
| A.10 | CPU regeneration building | Handing Over Progressive from 23 rd to 25 th Month |
| A.11 | Ozonization Plant building etc. (PT and CW Treatment Plant area) | Progressively from 20 th to 27 th Month |
| B | Fuel Oil System: | |
| B.1 | HFO and LDO Tank foundation | 17 th Month |
| B.2 | Fuel oil transfer pump house, HFO and LDO Pressurizing Pump House | Handing Over Progressive from 17 th to 18 th Month |
| C | Mill reject and Compressed Air System | |
| C.1 | Air Compressor / Mill reject Compressor building, equipment foundation etc. including its control room | Handing Over Progressive from 16 th to 20 th Month |
| D | Pipe Rack Foundation, Structural Fabrication and Erection | Handing Over Progressive from 15 th to 22 th Month |
| E | Non-Plant Buildings: | |
| E.1 | Service Building | 32 th Month |
| E.2 | Lube Oil Shed with Storage Facility | 23 rd Month |
| E.3 | Store | 20 th Month |
| E.4 | Canteen | 34 th Month |
| E.5 | Time & Security Office | 28 th Month |
| E.6 | Main Gate Complex | 35 rd Month |
| E.7 | Watch Towers | 33 st Month |
| E.8 | Weigh Bridge Complex | 37 th Month |
| F | FGD, SCR, Ammonia Shed etc: | |
| F.1 | FGD control room, Ball mill building, Gypsum dewatering building, RC pump & Oxidation blower | Progressively from 7 th to 23 th Month |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VI: TIME SCHEDULE

| Sl. No. | Activity | Schedule of completion from start of work |
|----------|---|---|
| | house, SO2 Analyzer room, Drain sumps, Misc. tank foundations, Limestone storage silo foundation, Absorber foundation, FGD flue gas duct foundation, Pipe rack including foundation, RC pump foundation, Oxidation blower foundation, Wet lime stone ball mill foundation, HT/LT Transformer foundations, Misc. pump foundations, Instrument Air receiver, GGH air receiver, Vacuum receiver foundations etc. | |
| G | Balance works like Roads, Drains, grade slab/paving, finishing works, architectural works of various buildings and other Systems/Buildings not listed above/not required for smooth operation of plant | 40 th Month |
| H | Chimney: | |
| H.1 | RCC Raft Foundation Completion along with Slip-form Assembly and Erection Completion | 7 th Month |
| H.2 | RCC Shell Completion (150m Approx.), Preparation and Approval of Detailed Fabrication Drawing for Floor Beams & Staircase (100%), Fabrication of Floor Beams & Staircase (50% Approx.) and Fabrication of Flue CANS (25% Approx.) | From 8 th Month to 13 th Month |
| H.3 | Balance RCC Shell Completion, Fabrication of Floor Beams & Staircase (50% Approx.) and Fabrication of Flue CANS (75% Approx.), Erection of all Floor Beams and Staircase with Handrails | From 14 th Month to 18 th Month |
| H.4 | Erection Completion of Flue CANS with Borosilicate Glass Block Liner | From 19 th Month to 22 nd Month |
| H.5 | Completion of all Electrical & Earthing Systems including all Balance Misc. Works viz. Final Painting, Flooring, Paving, Drains etc. & Handing Over to BHEL/MSPGCL | 25 th Month |

- 6.2.1 The above schedule is only tentative. The above schedule shall be advanced, if there are requirements to advance the project schedule and the civil works in the scope of the contractor is to be advanced to meet the project requirement. No extra payment whatsoever shall be paid on this account.
- 6.2.2 In order to meet the above schedule in general, and any other intermediate targets set, to meet customer/ project schedule requirements, Contractor shall arrange & augment all necessary resources from time to time on the instructions of BHEL Engineer.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VI: TIME SCHEDULE

6.3 Provision of penalty in case of slippage of intermediate milestones:

In case of slippage of Two Major Intermediate Milestones, mentioned as M1 & M2 hereunder, delay Analysis shall be carried out on achievement of each of these two Intermediate Milestones in reference to F-14.

| Milestones | Activity | Schedule of completion from start of work |
|------------|---|---|
| M1 | TG Deck Casting | 12 th Month |
| M2 | Power House BC Bay – RCC Floor Slabs of all Floors above Ground Level | 21 th Month |

Note: Refer clause no 14 of NIT “Annexure-04” regarding modalities against provision of penalty in case of slippage of Intermediate Milestones.

Notes:

- Common activities like Plant roads, drains, fencing, paving and other misc. works etc. shall be completed in Phase wise manner/ Instruction of Engineer within the Contractual time.
- **Above milestone dates has to be completed in parallel.**
- Bidders are requested to submit Resource deployment plan Area wise with detail program in line with above schedule in the form of Bar Chart/ MS project planer along with their offer.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VII: TERMS OF PAYMENT

7.0 Terms of Payment:

7.1 Progressive Payment / Final Payment:

The payments for works under the scope of this contract shall be as per clause no 2.6; clause 2.22; clause 2.23 of General Conditions of Contract and Chapter X of Special Conditions of Contract. However, Clause No. 10.5 on RA Bill Payments, in Volume-IB, Chapter-X of SCC, is revised as under:

The payment for running bills will normally be released within 30 days of submission of running bill complete in all respects with all documents. It is the responsibility of the contractor to make his own arrangements for making timely payments towards labour wages, statutory payments, outstanding dues etc. and other dues in the meanwhile.

7.2 Sanction of 'part' item rates in the item-rate contract for payment in Running Bills: In order to facilitate part payment, BHEL Site Engineer at his discretion may further split the contracted rates/percentages to suit site conditions, cash flow requirements according to the progress of work as per Vol. IC - GCC clause 2.23.1 (v), however following points are to be noted:

- a) Provided no 'part' payment is recommended till 25% of work in the item rate is executed.
- b) Payment of item rate to be made in not more than three instalments, last stage payment to be not lower than 20% of the item rate.

7.3 Interim payment for Civil Works:

- 7.3.1 In order to facilitate regular cash flow of the agency, 5% of the certified bill value shall be withheld pending submission of quality check formats/ documents.
- 7.3.2 5% of certified bill value as mentioned in clause 7.3.1 (as above) shall be released upon submission of all such documents and certification by engineer in-charge. However, this modality shall be implemented only for RA Bills of the two consecutive months failing which the payment against RA Bill of third consecutive month shall not be paid.
- 7.3.3 The above withheld amount of 5% of certified bill value shall be over and above other mandatory/contractual deductions as specified in GCC/SCC.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Other Duties

8.0 TAXES, DUTIES, LEVIES (Rev 13 dated 05/11/2018)

1. All taxes excluding GST, GST Cess & BOCW Cess but including, Royalties, fees, license, deposits, commission, any State or Central Levy and other charges whatsoever, if any, shall be borne by you and shall not be payable extra.
2. Any increase of the taxes excluding GST, GST Cess & BOCW Cess, at any stage during execution including extension of the contract shall have to be borne by the contractor. Quoted/ accepted rates/ price shall be inclusive of all such requirements. Please note that since GST on output will be paid by BHEL separately as enumerated below, your quoted rates/ price should be after considering the Input Credit under GST law at your end.
3. **GST** :
The successful bidder shall furnish proof of GST registration .GST along with Cess (as applicable) legally leviable & payable by the successful bidder as per GST Law, shall be paid by BHEL. Hence Bidder shall not include GST along with Cess (as applicable) in their quoted price.
4. GST charged in the Tax Invoice/Debit note by the contractor shall be released separately to the contractor only after contractor files the outward supply details in GSTR-1 on GSTN portal and input tax credit of such invoice is matched with corresponding details of outward supply of the contractor and has paid the GST at the time of filing the monthly return
5. Bidder shall note that the GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act & Rules referred there under) wherein the 'Bill To' details will as below :-
BHEL GSTN – As per **Annexure -1**
NAME -- Bharat Heavy Electricals Limited
ADDRESS – Site address
6. Bidder to immediately intimate on the day of removal of Goods (in case of any supply of goods) to BHEL along with all relevant details and a scanned copy of Tax Invoice to below email ids to enable BHEL to meet its GST related compliances :-
Email id ---- to be intimated later on.

In case of delay in submission of the abovementioned documents on the date of dispatch, BHEL may incur penalty /interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from the successful bidder, if such delay is not attributable to BHEL.
7. In case of raising any Supplementary Tax Invoice (Debit / Credit Note) Bidder shall issue the same containing all the details as referred to in Section 34 read with Rule 53.
8. Bidder shall note that in case GST credit is delayed/ denied to BHEL due to delayed / non receipt of goods and /or tax invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons not attributable to BHEL, GST amount shall be recoverable from the vendor along with interest levied / leviable on BHEL, as the case may be.
9. Bidder shall upload the Invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act. Bidder shall note that in case of delay in declaring such invoice in your return and GST credit availed by BHEL is denied or reversed subsequently as per GST Law , GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from the bidder along with interest levied / leviable on BHEL.
10. Way Bill: Successful Bidder to arrange for way bill / e-waybill for any transfer of goods for the execution of the contract.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Other Duties

The Bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants & machinery at site for execution of the works under this contract, Road Permit/ Way Bill, if required, shall be arranged by the contractor and BHEL will not supply any Road Permit/ Way Bill for this purpose.

11. **New taxes and duties:**-Any New taxes & duties, if imposed subsequent to due date of offer submission as per NIT & TCN, by statutory authority during contract period including extension, if the same is not attributable to you, shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL. However, you shall obtain prior approval from BHEL before depositing new taxes and duties.

Benefits and/or abolition of all existing taxes must be passed on to BHEL against new Taxes, if any, proposed to be introduced at a later date.

In case any new tax/levy/duty etc. becomes applicable after the date of bidder's offer but before opening of the price bid, the bidder must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of the price bids. Claim for any such impact after opening the price bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

12. For transportation work, bidder shall declare in his quotation whether he is registered under GST, if yes, whether he intends to claim GST on forward charge basis. In absence of this declaration, BHEL will proceed further with the assumption that bidder intends not to claim GST on forward charge basis. However, in case of GST registered transporter, the amount to the extent of goods and service tax will be retained till BHEL avails the credit of GST. Further, transporter shall issue tax invoice which inter alia includes gross weight of the consignment, name of the consigner and the consignee, registration number of vehicle in which the goods are transported, details of goods transported, details of place of origin and destination, GSTIN of the person liable for paying tax whether as consigner, consignee or goods transport agency, and also containing other information as mentioned under rule 46.
13. **TDS under Income Tax shall be deducted at prevailing rates on gross invoice value from the running bills unless exemption certificate from the appropriate authority/ authorities is furnished.**
14. **TDS under GST shall be deducted at prevailing rates on applicable value from the running bills.**
15. Refer Annexure – 2 for BOCW Act & Cess Act.

ANNEXURE-1

State wise GSTIN no.s of BHEL

| Sl. No | Projects under state | GSTIN |
|--------|----------------------|-----------------|
| 1 | Andhra Pradesh | 37AAACB4146P7Z8 |
| 2 | Bihar | 10AAACB4146P1ZU |
| 3 | Chhattisgarh | 22AAACB4146P1ZP |
| 4 | Gujarat | 24AAACB4146P1ZL |
| 5 | Jharkhand | 20AAACB4146P5ZP |
| 6 | Madhya Pradesh | 23AAACB4146P1ZN |
| 7 | Maharashtra | 27AAACB4146P1ZF |
| 8 | Orissa | 21AAACB4146P1ZR |
| 9 | Telangana | 36AAACB4146P1ZG |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Other Duties

ANNEXURE-2 BOCW Act & Cess Act

Bidder may please note that the sub-contractor/bidder of BHEL engaging building or construction worker in connection with building or other construction work, are required to follow the procedures enumerated below:

1. It shall be the sole responsibility of the contractor as employer to ensure compliance of all the statutory obligations under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.
2. It shall be sole responsibility of the contractor engaging Building Workers in connection with the building or other construction works in the capacity of employer to apply and obtain registration certificate specifying the scope of work under the relevant provisions of the Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 from the appropriate Authorities.
3. It shall be responsibility of the contractor to furnish a copy of such Registration Certificate within a period of one month from the date of commencement of Work.
4. It is responsibility of the contractor to register under the Building and other Construction Workers' Welfare Cess Act, 1996 and deposit the required Cess for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 at such rate as the Central Government may , by notification in the Official Gazette, from time to time specify. However, before registering and deposit of Cess under the Building and other Construction Workers' Welfare Cess Act, 1996, the contractor will seek written prior approval from the Construction Manager.
5. It shall be sole responsibility of the contractor as employer to get registered every Building Worker, who is between the age of 18 to 60 years of age and who has been engaged in any building or other construction work for not less than ninety days during the preceding twelve months as Beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996.
6. It shall be sole responsibility of the contractor as employer to maintain all the registers, records, notices and submit returns under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.
7. It shall be sole responsibility of the contractor as employer to provide notice of poisoning or occupation notifiable diseases, to report of accident and dangerous occurrences to the concerned authorities under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the rules made thereunder and to make payment of all statutory payments & compensation under the Employees' Compensation Act, 1923.
8. It shall be the responsibility of the sub-contractor as employer to make payment/deposit of applicable cess amount on the extent of work involving building or construction workers engaged by the sub-contractor within a period of one month from the receipt of payment. It shall also be responsibility of the Contractor to furnish BHEL on monthly basis, Receipts/ Challans towards Deposit of the Cess

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Other Duties

under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder along with following statistics :

- (i) Number of Building Workers employed during preceding one month.
 - (ii) Number of Building workers registered as Beneficiary during preceding one month.
 - (iii) Disbursement of Wages made to the Building Workers for preceding wage month.
 - (iv) Remittance of Contribution of Beneficiaries made during the preceding month
9. BHEL shall reimburse the contractor the Cess amount deposited for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder. However, BHEL shall not reimburse the Fee paid towards the registration of establishment, fees paid towards registration of Beneficiaries and Contribution of Beneficiaries remitted.
10. It shall be responsibility of the Building Worker engaged by the Contractor and registered as a beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 to contribute to the Fund at such rate per mensem as may be specified by the State government by notification in the Official Gazette. Where such beneficiary authorizes the contractor being his employer to deduct his contribution from his monthly wages and to remit the same, the contractor shall remit such contribution to the Building and other construction Workers' Welfare Board in such manner as may be directed by the Board , within the fifteen days from such deduction.
11. Bidders may please note that though the quoted price is exclusive of BOCW (which will be reimbursed by BHEL as per sub-clause 9 above) , however, If at any point of time during the contract period, non-compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder is observed, BHEL reserves the right to deduct the applicable cess (1%) on the contract value and penalty (if any, imposed by Cess Authorities) from the payables on account of non-compliance.
12. The contractor shall declare to undertake any liability or claim arising out of employment of building workers and shall indemnify BHEL from all consequences / liabilities / penalties in case of non-compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER IX – Technical Specifications and Plot Plan

9.0 Following Technical Specifications shall be integral parts of this tender as Vol-I-E:

| SL. NO | DOCUMENTS |
|--------|---|
| 1. | Detailed Technical Specification MSPGCL Specification & Section-D |
| 2. | Plot Plan |
| 3. | Geo-technical Investigation Report |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER X – Tentative Manpower Requirements

10.0 Tentative Manpower Requirement

- (a) Project manager – with 15 Years' experience in Industrial Foundation, Building & Power Plant Civil & Architectural Works.
- (b) Experienced Civil Engineers – 12 heads
- (c) Experienced Foreman / Supervisors – 15 heads
- (d) Planning & Billing Engineer – 05 heads
- (e) Stores, Gate Pass – 02 heads
- (f) Accounts & Administration - 04 heads
- (g) Quality Control Engineer/Chemist – 04 head
- (h) Safety Engineer – 03 head
- (i) Surveyor – 03 head capable to handle total station
- (j) Operator, Licensed Electrician, Mechanic - As per requirement
- (k) Experienced Carpenters & Helpers – lot for similar nature of work
- (l) Experienced Bar Benders & Helpers – lot for similar nature of work
- (m) Security Guards (Round The Clock) – As per requirement.

Note: Above manpower requirement is tentative only. Contractor shall augment manpower to meet the project schedule/ milestones.

10.1 Deputation of above man-power shall be jointly decided at site in line with construction Schedule.

10.2 Engineer/ supervisor for other functions like store & purchase, material management, planning, finance, administration etc. are to be provided as per site requirement and not considered in above list.

10.3 In the event of non deputation of engineer/ supervisor by the bidder as per above agreed schedule, BHEL shall reserve the right to deduct Rs 50,000.00 per man-month for engineer, Rs 35,000.00 per man-month for the supervisor/ safety officer/chemist and Rs. 30,000 per man-month for safety supervisor from RA bills. Further, induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement without any financial implication.

10.4 BHEL reserves the right to reject or approve the list of personnel proposed by the contractor. The persons whose bio-data have been approved by BHEL will have to be posted at site and deviation in this regard will not be permitted unless specific & reasonable justification is made.

10.5 In addition to above, a well experienced qualified engineer to be designated, as 'Project Co-ordinator', shall be deployed by the contractor. Such engineer shall have adequate exposure on the job and shall remain fully involved in all planning activities, guidance etc to contractor's own team during the complete execution period of contract.

10.6 The contractor should also submit the fitness/calibration certificate for T&Ps regularly and renew it as per applicable IS standards and statutory requirements. The tools & tackles shall not be removed from site without written permission of BHEL.

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER XI – BILL OF QUANTITIES AND % WEIGHTAGE OF INDIVIDUAL ITEMS

This Chapter consists of Part A & Part B of Volume II “Price bid”:

| <u>CONTENTS</u> | |
|---|--|
| Description | Remarks |
| PART A: Instructions to the Bidders | Instructions |
| PART B: % weightage for amount of individual items of Schedule of quantity | Refer Latest Chapter-XI of Vol-IA TCC (BILL OF QUANTITIES AND % WEIGHTAGE OF INDIVIDUAL ITEMS) |
| PART C: Total Lump Sum Price for entire scope of Work | This part is implanted in the E- Procurement portal entitled as “ Part-C of Vol-II Price Bid ”. |

Part A: Instructions to the Bidders

- 1. Bidders shall quote Total Lump-sum Price for the entire scope of work at the place implanted in the E-Procurement Portal titled as “Part-C of Vol-II Price Bid”.** Price mentioned elsewhere in the offer of the bidder shall be treated as Null and Void.
- BHEL has fixed the % weightages as in “Part-B” for the amount of individual items of Schedule of Quantity w.r.t. the total price of Price Bid Vol-II.
- Based on the pre-fixed % weightages, amount of individual items shall be derived by BHEL. This amount shall not be rounded off.
- Based on the quantities of individual item and the amount arrived in Sl No 3 above, item rate of individual items shall be derived by BHEL. This item rate shall be rounded off up to two decimal places and shall be used to calculate the total amount of an item.
- For the convenience of bidders, BHEL has issued an excel sheet with all requisite formulae as detailed above. ***However this excel sheet shall not form part of contract document. Further, this sheet should not be uploaded at the e-Portal.***
- Bidders to note that this is an ‘**Item rate contract**’. Payment shall be made for the actual quantities of work executed at the Unit rate arrived at as per serial no 4 above.

PART B: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price (as quoted by the bidder in “Part C of Vol-II-Price Bid”)

Note: This Chapter-XI is uploaded separately as file titled ‘**Chapter XI-BOQ and Percentage Weightage**’-3004.