

## **E-TENDER SPECIFICATIONS**

### **BHE/PW/PUR/NTPRT-CVL-PHA/Pkg-A(U-02):3001/Pkg-B (U-03):3002**

<b>S. No.</b>	<b>Package</b>	<b>E- TENDER SPECIFICATION NUMBER</b>
01	Package-A (Unit#02)	BHE/PW/PUR/NTPRT-CVL-PHA/Pkg-A (U#02)/3001
02	Package-B (Unit#03)	BHE/PW/PUR/NTPRT-CVL-PHA/Pkg-B (U#03)/3002

### **FOR**

**Package-A (Unit#02):** CIVIL & ARCHITECTURAL OF POWER HOUSE CIVIL PACKAGE FOR UNIT#02 AT 3X800 MW PVUNL PATRATU, JHARKHAND.

AND

**Package-B (Unit#03):** CIVIL & ARCHITECTURAL OF POWER HOUSE CIVIL PACKAGE FOR UNIT#03 AT 3X800 MW PVUNL PATRATU, JHARKHAND.

### **VOLUME I - TECHNICAL BID**

#### **THIS TENDER SPECIFICATION CONSISTS OF:**

<b>Notice Inviting Tender</b>	
<b>Volume-IA</b>	<b>Technical Conditions of Contract</b>
<b>Volume-IB</b>	<b>Special conditions of Contract</b>
<b>Volume-IC</b>	<b>General conditions of Contract</b>
<b>Volume-ID</b>	<b>Forms &amp; Procedures</b>
<b>Volume-IE</b>	<b>Technical Specification and Plot Plan</b>
<b>Volume II</b>	<b>Price Bid</b>



**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 <b><u>Vol-IA-3001-3002</u></b> )
NIL	Notice Inviting Tender	(Part of <b><u>Vol-IA-3001-3002</u></b> )
I-A	Technical Conditions of Contract	Vol-I-A-3001-3002
I-B	Special Conditions of Contract	Vol-I-BCD-3001-3002
I-C	General Conditions of Contract	(Part of Vol-I-BCD-3001-3002)
I-D	Forms & Procedures	(Part of Vol-I-BCD-3001-3002)
I-E	Technical Specification and Plot Plan	Vol-IE-3001-3002
II	Price Bid Specification as specified in E-Procurement Portal	Volume-II-3001

## **E-TENDER SPECIFICATIONS**

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01	Package-A (Unit#02)	BHE/PW/PUR/NTPRT-CVL-PHA/Pkg-A (U#02)/3001
02	Package-B (Unit#03)	BHE/PW/PUR/NTPRT-CVL-PHA/Pkg-B (U#03)/3002

### **FOR**

**Package-A (Unit#02): CIVIL & ARCHITECTURAL OF POWER HOUSE CIVIL PACKAGE FOR UNIT#02 AT 3X800 MW PVUNL PATRATU, JHARKHAND.**

AND

**Package-B (Unit#03): CIVIL & ARCHITECTURAL OF POWER HOUSE CIVIL PACKAGE FOR UNIT#03 AT 3X800 MW PVUNL PATRATU, JHARKHAND.**

EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

LAST DATE FOR            Refer Notice Inviting Tender  
TENDER SUBMISSION

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

M/s. ....

.....

PLEASE NOTE:  
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

**AGM (Purchase)**

Place: Nagpur

Date:

3001-  
3002

# NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



**BHEL PSWR  
Notice Inviting Tender**

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Date: 29/04/2019

**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/NTPRT-CVL-PHA/Pkg-A(U-02):3001/Pkg-B (U-03):3002	
ii	Broad Scope of job	<b>Package-A (Unit#02):</b> CIVIL & ARCHITECTURAL OF POWER HOUSE CIVIL PACKAGE FOR UNIT#02 AT 3X800 MW PVUNL PATRATU, JHARKHAND. AND <b>Package-B (Unit#03):</b> CIVIL & ARCHITECTURAL OF POWER HOUSE CIVIL PACKAGE FOR UNIT#03 AT 3X800 MW PVUNL PATRATU, JHARKHAND.	
iii	<b>DETAILS OF TENDER DOCUMENT</b>		
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 Specification 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	<b>From <a href="https://bhel.abcprocure.com">https://bhel.abcprocure.com</a></b> (Tender documents will be available for downloading from BHEL e-Procurement website till due date of submission) Brief information of the tender shall also be available at Central Public Procurement portal ( <a href="https://eprocure.gov.in">https://eprocure.gov.in</a> ) and BHEL website ( <a href="http://www.bhel.com">www.bhel.com</a> ).	<i>Applicable</i>

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S No.	ISSUE	DESCRIPTION	
v	DUE DATE & TIME OF OFFER SUBMISSION	<b>Date: 20/05/2019, Time: 15.00 Hrs</b> <b>Place: on E-Tender Portal</b> <b><a href="https://bhel.abcprocure.com">https://bhel.abcprocure.com</a></b> <b>• Offer to be submitted online only through e-procurement Portal</b>	Applicable
vi	OPENING OF TENDER (Techno-Commercial Bid)	<b>Date: 20/05/2019, Time: 16.00 Hrs</b> Notes: (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. (2) <b>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.</b>	Applicable
vii	EMD AMOUNT	<b>Rs. 40,50,000/- (Rupees Forty Lakhs Fifty Thousands only)</b> <b>[To be submitted in the form and manner as mentioned below]</b> <b>Important Note: 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.</b>	Applicable
viii	COST OF TENDER	<del>Rs 2000/-</del> <del>[To be submitted in the form and manner as mentioned below]</del>	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)	<b>13/05/2019: 11.00 Hrs</b> at BHEL PSWR HQ Nagpur	Applicable
xi	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)	<b>Mrs. Pravin Tripathi, IA &amp; AS (Retd.)</b> <b>and</b> <b>Shri D R S Chaudhary, IAS (Retd),</b>  (Please refer Annexure-04 "Important Information" of NIT for more details)	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 ( <a href="http://www.bhel.com">www.bhel.com</a> -->Tender Notifications →View Corrigendum), Central Public Procurement portal ( <a href="https://eprocure.gov.in">https://eprocure.gov.in</a> ) & on e-tender portal <a href="https://bhel.abcprocure.com">https://bhel.abcprocure.com</a> 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

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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.**

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	Receipt of Amount Transferred	Recei pt of cash	Scan Copy has to be uploaded	Scan Copy has to be uploaded	Scan Copy of BG has to be uploaded.

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<b>Procedure for Earnest Money Deposit</b>					
Submission of EMD to BHEL PSWR, Nagpur	into BHEL Account	depos it 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 shall be sent directly by the Bank to BHEL under Registered Post (Acknowledgement Due), addressed to the Purchase Department, BHEL PSWR, Nagpur.

~~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](http://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](mailto:swapnil.h@eptl.in)
- ❖ Mr. Hardik Oza, Support Executive, Ph: +91 7940270560, e-mail ID: [hardik.oza@eptl.in](mailto:hardik.oza@eptl.in)
- ❖ Mr. Ankur Bhatt, Support Executive, Ph: +91 7940270590, e-mail ID: [ankur.bhatt@eptl.in](mailto:ankur.bhatt@eptl.in)
- ❖ Mr. Prashant, Asst. Manager – Implementation & Support, Ph: +91 7940270545, e-mail ID: [prashant@eptl.in](mailto: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-I A (Techno Commercial Bid)' & 'PART-I B (EMD/COST of TENDER)'
- PART-II (Price Bid)

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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
<b>Part-I A</b>		
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. <b>Note:</b> a. In case of any deviation, the same should be submitted separately, indicating respective clauses of tender against which deviation is taken 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 Specification 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.	

<b>PART-I B</b>		
i.	1. Earnest Money Deposit (EMD) in the form as indicated in this Tender <b>OR</b> 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)	

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	Note: Refer Clause No-3 and 4 of NIT for further details	
<b>PART-II</b>		
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

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 3<sup>rd</sup> 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 3<sup>rd</sup> 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:

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- 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 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 ( $S_{1-1}, S_{1-2}, S_{1-3}, S_{1-4}, S_{1-5} \dots S_{1-T_1}$ ) for similar package  $P_1$ , for the 'period of assessment' ' $T_1$ ' (i.e.  $S_1 = S_{1-1} + S_{1-2} + S_{1-3} + S_{1-4} + S_{1-5} + \dots + S_{1-T_1}$ ). 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

**Aggregate of Performance scores for all similar packages in all the Regions**

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

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

- 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)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
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 ( $\Sigma$ ) of columns (iii) to (ix)

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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 <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	T <sub>4</sub>	T <sub>5</sub>	...	T <sub>N</sub>	Sum (Σ) of columns (iii) to (ix)  = T <sub>T</sub>
3	Monthly performance scores for the corresponding period (as in Row 2)	S <sub>1-1</sub> , S <sub>1-2</sub> , S <sub>1-3</sub> , S <sub>1-4</sub> , ... S <sub>1-T1</sub>	S <sub>2-1</sub> , S <sub>2-2</sub> , S <sub>2-3</sub> , S <sub>2-4</sub> , ... S <sub>2-T2</sub>	S <sub>3-1</sub> , S <sub>3-2</sub> , S <sub>3-3</sub> , S <sub>3-4</sub> , ... S <sub>3-T3</sub>	S <sub>4-1</sub> , S <sub>4-2</sub> , S <sub>4-3</sub> , S <sub>4-4</sub> , ... S <sub>4-T4</sub>	S <sub>5-1</sub> , S <sub>5-2</sub> , S <sub>5-3</sub> , S <sub>5-4</sub> , ... S <sub>5-T5</sub>	.. .. .. .. .. ..	S <sub>N-1</sub> , S <sub>N-2</sub> , S <sub>N-3</sub> , S <sub>N-4</sub> , ... S <sub>N-TN</sub>	-----
4	Sum of Monthly Performance scores of the corresponding Package for the corresponding period (as in row-3)	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	S <sub>4</sub>	S <sub>5</sub>	...	S <sub>N</sub>	Sum (Σ) of columns (iii) to (ix)  = S <sub>T</sub>

ii). Calculation of Overall 'Performance Rating' (R<sub>BHEL</sub>) 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<sub>BHEL</sub>' 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<sub>BHEL</sub> 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'.

iii). Factor "L" assigned based on Overall Performance Rating (R<sub>BHEL</sub>) at Power Sector Regions:

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Sl. no.	Overall Performance Rating (R <sub>BHEL</sub> )	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

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		x). Others (Mechanical)
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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’)  $\geq 60$  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  $\geq 60$  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’)  $\geq 60$ , (b)- First timer” bidders having average of available performance scores  $\geq 60$  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

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b. Up to Steam Blowing in case of Boiler/ESP/Piping Packages

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 25<sup>th</sup> 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

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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 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:

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- 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 1% 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

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consortium partners, then each partner shall submit SD equivalent to 0.5% of the total contract value 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.

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**ANNEXURE - 1**

**PRE QUALIFYING CRITERIA**

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<b>JOB</b>	<b><u>Package-A (Unit#02):</u> CIVIL &amp; ARCHITECTURAL OF POWER HOUSE CIVIL PACKAGE FOR UNIT#02 AT 3X800 MW PVUNL PATRATU, JHARKHAND.</b>
	<b>AND</b>
	<b><u>Package-B (Unit#03):</u> CIVIL &amp; ARCHITECTURAL OF POWER HOUSE CIVIL PACKAGE FOR UNIT#03 AT 3X800 MW PVUNL PATRATU, JHARKHAND.</b>

S No	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Applicability	
<b>A</b>	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)	<b>APPLICABLE</b>	
<b>B</b>	<p><b><u>TECHNICAL PQR:</u></b></p> <p>Bidder shall essentially meet all the Qualifying Requirements (i.e. <b>B.1, B.2, B.3 and B.4</b>) as under, in the last seven years as on latest date of bid submission:</p> <p><b>B.1:</b> Bidder should have Executed “<b>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</b>” for any one of the following in the last seven years from latest date of bid submission:</p> <p><b>B.1.1)</b> Executed One work of value not less than <b>Rs. 2440.00 Lakhs</b> against single work order.</p> <p align="center"><b>OR</b></p> <p><b>B.1.2)</b> Executed Two works each of value not less than <b>Rs. 1525.00 Lakhs</b> against maximum two work orders.</p> <p align="center"><b>OR</b></p> <p><b>B.1.3)</b> Executed Three works each of value not less than <b>Rs. 1220.00 Lakhs</b> against maximum three work orders.</p> <p align="center"><b>AND</b></p> <p><b>B.2:</b> Bidder should have executed Reinforced Cement Concrete (RCC) quantities of atleast <b>7026 Cum</b> within a period of twelve consecutive months against one running/ completed contract.</p> <p align="center"><b>AND</b></p> <p><b>B.3:</b> Bidder should have executed atleast <b>13476 Cum</b> of Earthwork in filling involving mechanical compaction within a period of twelve consecutive months against one running/ completed contract.</p>	<b>APPLICABLE</b>	

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S No	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Applicability	
	<p align="center"><b>AND</b></p> <p><b>B.4:</b> Bidder should have executed any one of the following:</p> <p><b>B.4.1:</b> Bidder should have executed one <b>STG Deck</b> of minimum 190MW rating power plant.</p> <p align="center"><b>OR</b></p> <p><b>B.4.2:</b> Bidder should have executed at least one dynamic equipment/machine cast-in situ foundation including deck at minimum height of <b>"4 Mtr or more"</b> above the finished floor level having at least <b>"400 Cum RCC in Deck"</b> against one/ two work orders.</p> <p><b>Note:</b> Bidder should satisfy PQR B.1, B.2, B.3 and B.4 as a <u>standalone bidder</u>. In case a bidder does not satisfy <b>PQR-B.4</b> above, then the bidder can form consortium with one party who satisfies the PQR B.4 above. This will be termed as <b>"Consortium Bidding"</b>. In case of consortium bidding, following shall be applicable:</p> <ul style="list-style-type: none"> <li>• Prime bidder should satisfy PQR B.1, B.2 &amp; B.3 above.</li> <li>• Agency satisfying PQR B.4 shall be termed as <b>"Consortium Partner"</b>.</li> <li>• Prime bidder shall be responsible for satisfying the financial PQR-C (i.e. C-1, C-2, C-3 &amp; C.4).</li> <li>• 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.</li> </ul> <p><u>All conditions as in Clause 23 of NIT shall also be applicable for consortium bidding.</u></p>		
<b>C-1</b>	<b>Financial TURNOVER</b> Bidders must have achieved an average annual financial turnover (audited) of <b>Rs. 915.00 Lakhs</b> or more over last three Financial Years (FY) i.e. 2015-16, 2016-17 & 2017-18.	<b>APPLICABLE</b>	
<b>C-2</b>	<b>NETWORTH</b> (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.	<b>APPLICABLE</b>	
<b>C-3</b>	<b>PROFIT</b> 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.	<b>APPLICABLE</b>	
<b>C-4</b>	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.	<b>APPLICABLE</b>	

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

**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<sub>N</sub> = 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).

X<sub>0</sub> = All India Avg. Consumer Price index for industrial workers for last month of work execution.

Y<sub>N</sub> = 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).

Y<sub>0</sub> = Monthly Whole Sale Price Index for All Commodities for last month of work execution.

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S No	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Applicability	
<b><u>Explanatory Notes for PQR B.2, B.3 &amp; B.4 (Technical):</u></b>			
<p>3. Unless otherwise specified, for the purpose of “<b>B.2, B.3 &amp; B.4 Technical Criteria</b>”, the word ‘<b>EXECUTED</b>’ means achievement of milestones as defined below –</p> <ol style="list-style-type: none"> <li>a) "ACHIEVEMENT OF PHYSICAL QUANTITIES" as per PQRs.</li> <li>b) <del>“READINESS FOR COAL FILLING” in respect of Mill Bunker.</del></li> <li>c) <del>“CHARGING” in respect of Power Transformers / Bus Ducts / “HT/LT Switchgears” / “HT / LT Cabling”.</del></li> <li>d) <del>For C&amp;I works: "SYNCHRONISATION" in case of power project and “WORK COMPLETION of the value as defined in PQR” in case of industry.</del></li> <li>e) <del>"BOILER LIGHT UP" in respect of Boiler / CFBC / ESP.</del></li> <li>f) <del>"GAS IN" in respect of HRSG.</del></li> <li>g) <del>“STEAM BLOWING COMPLETION” in respect of Power Cycle Piping.</del></li> <li>h) <del>“HYDRAULIC TEST” of the system in respect of Pressure parts / LP Piping / CW Piping.</del></li> <li>i) <del>“FULL LOAD OPERATION OF THE UNIT” in respect of Insulation work.</del></li> <li>j) <del>"SYNCHRONISATION" in respect of STG / GTG.</del></li> <li>k) <del>"SPINNING" in respect of HTG.</del></li> <li>l) <del>“COMPLETION AND HANDING OVER FOR MECHANICAL ERECTION” in respect of STG Deck and Machine/Equipment foundation.</del></li> </ol> <ol style="list-style-type: none"> <li>4. <del>Boiler means HRSG or WHRB or any other types of Steam Generator.</del></li> <li>5. <del>Power Cycle piping means Main Steam, Hot Reheat, Cold Reheat, HP Bypass.</del></li> <li>6. <del>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.</del></li> <li>7. <del>Scope for Capital overhaul of STG shall cover Bearing Inspection work and overhauling of all cylinders of the Turbine.</del></li> <li>8. <del>In case the tendered scope is not a Pulverized Fuel Boiler, experience of Oil/Gas Fired Boilers can also be considered.</del></li> <li>9. <del>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.</del></li> </ol> <p><b><u>Explanatory Notes for PQR -C (Financial):</u></b></p> <ol style="list-style-type: none"> <li>10. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated against C-1 above.</li> <li>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.</li> <li>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.</li> <li>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)</li> </ol>			

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

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S No	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Applicability	
	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 ' <u>standalone</u> ' 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.		

**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:**

- 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.**
- Void**

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<b>Bidder's Response against BHEL TECHNICAL PQR (WHICHEVER IS APPLICABLE)</b>				
<b>PQR No</b>	<b>Pre-Qualifying Requirement</b>	<b>Ref of Detailed Work Order, Name of the Work based on which bidder is claiming PQR</b>	<b>Ref of Completion Certificate and <b>TDS Certificates</b> based on which bidder is claiming PQR</b>	<b>Remarks, if Any</b>
<b>B</b>	Bidder shall essentially meet all the Qualifying Requirements ( <b>i.e. B.1, B.2, B.3 and B.4</b> ) as under, in the last seven years as on latest date of bid submission:			
<b>B.1</b>	<p>Bidder shall essentially meet all the Qualifying Requirements (<b>i.e. B.1, B.2, B.3 and B.4</b>) as under, in the last seven years as on latest date of bid submission:</p> <p><b>B.1:</b> Bidder should have Executed <b>“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”</b> for any one of the following in the last seven years from latest date of bid submission:</p> <p><b>B.1.1)</b> Executed One work of value not less than <b>Rs. 2440.00 Lakhs</b> against single work order.</p> <p align="center"><b>OR</b></p> <p><b>B.1.2)</b> Executed Two works each of value not less than <b>Rs. 1525.00 Lakhs</b> against maximum two work orders.</p> <p align="center"><b>OR</b></p> <p><b>B.1.3)</b> Executed Three works each of value not less than <b>Rs. 1220.00 Lakhs</b> against maximum three work orders.</p>			
<b>B.2</b>	Bidder should have executed Reinforced Cement Concrete (RCC) quantities of atleast <b>7026 Cum</b> within a period of twelve consecutive months against one running/ completed contract			

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<b>Bidder's Response against BHEL TECHNICAL PQR (WHICHEVER IS APPLICABLE)</b>				
<b>PQR No</b>	<b>Pre-Qualifying Requirement</b>	<b>Ref of Detailed Work Order, Name of the Work based on which bidder is claiming PQR</b>	<b>Ref of Completion Certificate and TDS Certificates based on which bidder is claiming PQR</b>	<b>Remarks, if Any</b>
<b>B.3</b>	Bidder should have executed atleast <b>13476 Cum</b> of Earthwork in filling involving mechanical compaction within a period of twelve consecutive months against one running/ completed contract			
<b>B.4</b>	<p>Bidder should have executed any one of the following:</p> <p><b>B.4.1:</b> Bidder should have executed one <b>STG Deck</b> of minimum 190MW rating power plant.</p> <p align="center"><b>OR</b></p> <p><b>B.4.2:</b> 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 "<b>400 Cum RCC in Deck</b>" against one/ two work orders</p>			
<p><b>NOTE:</b></p> <ol style="list-style-type: none"> <li><b>BIDDERS MUST CLEARLY INDICATE IN THE TABLE ABOVE, HOW THEY ARE SATISFYING TECHNICAL PQR ALONG WITH THE REFERENCE OF THE SUPPORTING DOCUMENTS.</b></li> <li><b>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.</b></li> </ol>				

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**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> <del>ONE TIME EMD / ONLY FOR THIS TENDER</del>	
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 <b>PRE QUALIFICATION CRITERIA</b> (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format	Applicable/ <del>Not Applicable</del>	YES / NO
7	Audited profit and Loss Account for the last three years	Applicable/ <del>Not Applicable</del>	YES/NO
8	Copy of PAN Card	Applicable/ <del>Not Applicable</del>	YES/NO
9	Whether all pages of the Tender documents including annexures, appendices etc. are read understood and signed	Applicable/ <del>Not Applicable</del>	YES/NO
10	Integrity Pact	Applicable/ <del>Not Applicable</del>	YES/NO
11	Declaration by Authorized Signatory	Applicable/ <del>Not Applicable</del>	YES/NO
12	No Deviation Certificate	Applicable/ <del>Not Applicable</del>	YES/NO

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

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**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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**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

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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.

**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.

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- .....
- 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.
- 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.

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- .....
- 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.
  - 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) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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**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](mailto:prchiwarkar@bhel.in). Ph: +91 – 712 – 3048 - 633  
Dy Manager Purchase, Email: [nktiwari@bhel.in](mailto:nktiwari@bhel.in), Ph: +91 – 712 – 3048 – 651  
Sr Engineer Purchase, Email: [svm@bhel.in](mailto:svm@bhel.in), Ph: +91 – 712 – 3048 – 715  
Asst. Engineer Purchase, Email: [bajjnath@bhel.in](mailto: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](http://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](http://www.bhel.com) on “supplier registration page” at the following link: [http://www.bhel.com/vender\\_registration/pdf/Suspension\\_guidelines\\_adbridged.pdf](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](http://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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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](http://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: SI 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.

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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:**

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- 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. Amended Quantity Variation Sub Clause no. 2.14.1 of Clause no. 2.14 of Vol-IC GCC:**

“The quantities given in the contract are tentative and may change to any extent (both in plus side and minus side). The quoted rates for individual items shall remain firm irrespective of any variations in the individual quantities. No compensation becomes payable in case the variation of the final executed contract value is within the limit of Minus (-) 30% of awarded contract value.”

**Note:** Sub clause no. 2.14.2 of Clause no. 2.14 shall be applicable as per Vol-IC-GCC.

**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.

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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  
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](http://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](http://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.**

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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](http://www.bhel.com)).

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

**"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 SI No 1 viii of NIT) and Earnest Money deposit (EMD) (as in SI 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."

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**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
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](mailto:prchiwarkar@bhel.in)

(2) [nktiwari@bhel.in](mailto:nktiwari@bhel.in)

**Fax:** 0712-3048699

**21. Modality of Tendering and Award:** This is a combined tender for Power House Civil Package for Package-A (Unit #02) and Package-B (Unit#03) at Patratu site. The entire scope of work is being split into two equal packages (Package-A and Package-B). BOQ/Rate Schedule enclosed in this tender is for one package (package-A-Unit#02) only and the quantity of the second package (Package-B- Unit#03) is same as that of Package-A. These packages are tendered together with price matching philosophy with following modality:

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- i) Bidder has to submit their Price for Package-A (Unit#02) only as indicated in the Part-C of Vol-II "Price Bid".
  - ii) L-1 Bidder shall be considered for award of Package-A (Unit#02).
  - iii) For award of Package-B (Unit#03), next bidder in the order of their price competitiveness (i.e. L-2, then L-3 and hence forth) shall be given an option to match their price/rate, with the Awarded/Finalized price/rate of Package-A (Unit#02). In case none of the bidders agree to match the Awarded price/rate of Package-A (Unit#02) then BHEL may consider awarding the Package-B (Unit#03) to L-1 bidder or opt any other suitable method to finalize the Package-B (Unit#03).
  - iv) Each package will be treated as a separate contract.
  - v) All tender documents are common for both the Packages i.e. Package-A and Package-B.

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**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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**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/NTPRT-CVL-PHA/Pkg-A(U-02):3001**

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](http://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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**3001-  
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# TECHNICAL CONDITIONS OF CONTRACT (TCC)

**BHARAT HEAVY ELECTRICALS LIMITED**



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## Chapter - I: PROJECT INFORMATION

### 1.0 Project Information:

3X800 MW PVUNL PATRATU TPP PHASE-1 is being set up by PVUNL (Patratu Vidyut Utpadan Nigam Limited, a subsidiary of NTPC Ltd in Joint venture with Jharkhand Bijli Vitran Nigam Limited).

Sl. No.	Description	Details
1.1	Location	3X800 MW PVUNL PATRATU TPP PHASE-1
1.2	Nearest Railway Station	Patratu (04 Kms)
1.3	Nearest Airport	RANCHI (45 Kms)
1.4	Access By Road	Patratu (04 Kms)
1.5	Major Towns/Cities	Ranchi (45 Kms)
1.6	Source of Water	Patratu Reservoir.
1.7	<b>Meteorological Data based on observations from 1951 to 1980</b>	
	Maximum Temperature	48 degree Centigrade
	Minimum Temperature	0.6 degree Centigrade

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### 2.0 SCOPE OF WORK

**2.1 Micro Grading:** After the completion of civil work the entire area shall be micro graded up to required levels by the contractor to achieve the ground profile as per pavement level requirement at no extra cost. Filling/ cutting required to bring the site up to the required finished levels is in the scope of the contractor. Extra earth required to make up to paved levels shall be arranged by the contractor at his own cost from approved borrow areas.

### 2.2 SCOPE OF WORK: -

The scope works under the specification covers the supply, storage at site, storage of material supplied by BHEL (i.e. taking delivery of materials from plant gate / BHEL stores, transportation to site), construction, painting, protection of all items as specified hereinafter but without excluding any other necessary components, which are not mentioned herein but are required for the completeness and efficient, easy and reliable operation of the system.

The works to be performed under this specification include execution of complete civil and architectural works for foundations for equipment, buildings, facilities, substructures, superstructures, underground structure including inserts, and infrastructure works as per the detailed scope and specification enclosed elsewhere in this tender document. The works shall generally comprise (but not limited to) carrying out all necessary survey, tests, studies, investigations as may be required for design, construction or erection up to the specified terminal points mentioned elsewhere, including supply of all materials, consumables, tools & plants and labour etc. as per approved drawings and specification **On item rate basis.**

Following Civil structures are covered under this tender:

#### **Package A: -Power House Unit#2**

- 1. Power House Building of Unit# 2:** All Civil and architectural works of Raft, foundation bolt, tie beams, plinth beams, grade slab, ACW pump, DMCW Pumps, intermediate floor slab, Common Control Room, Roof slab, cable trenches, garland drains, plinth protection etc.
- 2. TG Foundation including deck of Unit#2:** TG Raft, Columns, TG Deck, Condenser wall, ACC HOT BOX, CEP Pit, CW Pit etc.
- 3. BFP Foundation & Deck of Unit #2:** All civil and architectural work required to complete BFP Foundations.
- 4. Transformer Yard of Unit#2:** All civil work of transformer yard including Transformer foundation (GT & ST, AUX Transf. Foundations), Fire wall, Fencing, gates, pavements, surface drains, cable trenches, OWS Pit etc.

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5. **Pipe/Cable Rack along C Row of Power House of Unit#2:** All civil works up to pedestals for handing over to structural agency for erection works.
6. **Miscellaneous equipment foundation.**
7. **Sewerage systems:** Sewage collection pit, Manhole chambers, sewer line etc. complete civil works from PH Building to main collection pit.
8. **Earthing & earth pits, risers:** Total civil works including laying of earth mat and earth pits in Power House and Transformer yard area.
9. **Road Work as per Drawing for this Package.**
10. **UPV Test of TG foundation deck and Other Structure as per Customer Specification.**
11. **Preparation of design & detailed drawing for temporary support system for form work of TG Deck construction, obtaining approval, and providing & installing and removal of above support system after intended use.**
12. **DG Set for Unit#2 &3**

### **Package B: -Power House Unit#3**

1. **Power House Building of Unit# 3:** All Civil and architectural works of Raft, foundation bolt, tie beams, plinth beams, grade slab, ACW pump, DMCW Pumps, intermediate floor slab, Roof slab, cable trenches, garland drains, plinth protection etc.
2. **TG Foundation including deck of Unit#3:** TG Raft, Columns, TG Deck, Condenser wall, ACC HOT BOX, CEP Pit, CW Pit etc.
3. **BFP Foundation & Deck of Unit #3:** All civil and architectural work required to complete BFP Foundations.
4. **Transformer Yard of Unit#3:** All civil work of transformer yard including Transformer foundation (GT & ST, AUX Transf. Foundations), Fire wall, Fencing, gates, pavements, surface drains, cable trenches, OWS Pit etc.
5. **Pipe/Cable Rack along C Row of Power House:** All civil works up to pedestals for handing over to structural agency for erection works.
6. **Compressor House Building**
7. **Sewerage systems:** Sewage collection pit, Manhole chambers, sewer line etc. complete civil works from PH Building to main collection pit.
8. **Earthing & earth pits, risers:** Total civil works including laying of earth mat and earth pits in Power House and Transformer yard area.
9. **Road Work as per Drawing for this Package.**
10. **UPV Test of TG foundation deck and Other Structure as per Customer Specification.**

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- 11. Preparation of design & detailed drawing for temporary support system for form work of TG Deck construction, obtaining approval, and providing & installing and removal of above support system after intended use.**

**Interchangeability of Scope:**

BHEL reserves the right to swap any particular scope of work/any portion of work between Package A and Package B of subject tender as per the requirement of the site during execution of the job. In no case Scope of any vendor should be allowed to reduce less than 85% of total contract value of any package due to invoking of this clause by engineer in charge

**2.3 CIVIL WORKS RELATED TO FOLLOWING SERVICES: -**

1. Storm Water drain system under this contract scope of work
2. Roads
3. RCC pavements
4. Crane movement road, main road approach roads, drains culverts
5. ERC/IRC
6. Process waste collection system
7. ETP Sumps for this package.
8. Waste Water Sewer
  - 8.1 Oily Waste Sewer (OWS)
  - 8.2 Contaminated Rain/Fire Water Sewer (CRWS)
9. Sanitary and plumbing system in the buildings (for the buildings within the scope of this contract only)
10. Cooling water Supply & Return(WCS/WCR) within the battery limit of this package
11. RCC Electrical/Instrumentation cable trenches and pipe trenches
12. Road Crossings
13. Culverts
14. Pipe way Bridges
15. Pipe way Sleepers
16. 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.
17. Hard stand required for erection of heavy equipment.
18. Strengthening of existing roads for crane movement if required.

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19. All approach roads from existing main roads as per detailed engineering requirement for maintenance and operation.
20. Maintenance and erection approach roads/ by strengthening of roads.
21. Any temporary activities required to complete the work.
22. Structural platforms, monorail beams, walkways, crossovers, handrails etc for miscellaneous equipment, piping etc for the buildings/structures within the scope of this contract.
23. Bidder can set Fly ash brick manufacturing plant at its own cost near plant premise. Space and fly ash may be provided free of cost depending upon availability of space from customer. Bidder to note that space and fly ash availability depends upon PVUN input. If PVUN Provide space and fly ash to BHEL on free basis we will extend this to our **successful** bidder if not we will not be able to provide this facility. Cement will not be issued on free basis for manufacturing of Fly ash brick. Bidder to asses accordingly.

### **2.4 THE WORK WILL INVOLVE.**

All civil work required to complete Civil and architectural works for Balance AHP Civil as per scope 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, road work, drainage, grouting etc.

### **2.5 CIVIL AND ARCHITECTURAL WORKS**

The scope covers all Civil and Architectural works within the battery limits of this Package. The important works covered under this package are as below:

- 2.5.1 Excavation of earth and backfilling including dewatering of excavations for foundations, trenches, pits, etc. till the construction of the same is completed and disposal of surplus earth.
- 2.5.2 Construction Raft/ Foundation with pedestal for all civil structures, trenches, tunnels, sumps, grade beams, tie beams at foundation level, grade slabs, floor slabs and roof slabs at any height, equipment foundations etc.
- 2.5.3 Preparation and submission of detailed calculations, arrangement drawings and detail drawings of formwork, staging and scaffolding for all reinforced concrete structures and foundations as directed by the Engineer for his checking and approval.
- 2.5.4 Preparation of detailed working drawings and bar bending schedule for all reinforced concrete work and getting them approved before start of work by the BHEL Engineer.

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- 2.5.5 Taking delivery of TMT Steel, structural steel, earthing rod, GI flat, GI grating, MS Rails etc. from BHEL stores/ storage yards for utilisation in construction work under this package.
- 2.5.6 Fabrication and fixing of templates/frames, inserts, fixing of anchor bolts, sleeves, and embedments etc. in concrete.
- 2.5.7 Supply of all instruments and personnel for conducting necessary tests at site as specified/as directed by the Engineer.

### 2.6 **General Scope:**

- 2.6.1 Furnishing all labour, materials, supervision, construction plans, equipment, supplies, transport, to and fro the site, fuel, compressed air, 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.
- 2.6.2 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.
- 2.6.3 Furnishing test reports for the products used or intended to be used, if called for the specifications or if so desired by the engineer.
- 2.6.4 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.
- 2.6.5 Arranging manufacturer's supervision for items of work done as per manufacturer's specifications when so specified.
- 2.6.6 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.
- 2.6.7 Providing all incidental items not shown or specified but reasonably implied or necessary for the successful completion of the work in accordance with contract.
- 2.6.8 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.
- 2.6.9 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.

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

- 2.6.10** 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.
- 2.6.11** 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.

### **2.7 WORKS BY OTHERS**

No work under the specification will be provided by any agency other than the contractor unless specifically mentioned elsewhere in the contract.

### **2.8 SITE VISIT**

Contractor should visit 3X800MW PVUN project site, to acquaint himself with the conditions prevailing at site and in and around the plant premises, together with all the statutory, obligatory, mandatory requirements of various authorities before submission of the bid.

### **2.9 Carrying out work by BHEL**

BHEL reserves the right to withdraw/restrict/alter the quantum of works as per clause No. 2.7 of GCC.

**NOTE:**

**Contractor has to make him well conversant with the Customer specification. In case of ambiguity between BHEL and customer specification, customer specification shall prevail.**

### **2.10 PREAMBLE FOR THE SCHEDULE OF QUANTITIES/BOQ.**

- 2.10.1** Details of the items in this Schedule shall be read in conjunction with the Corresponding Consultants/PVUN specifications, drawings and other documents and shall have precedence over any contrary statement mentioned anywhere in this document.
- 2.10.2** 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 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

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construction. Final drawings will be issued progressively during the execution of the work.

- 2.10.3** Items of work provided in this schedule but not covered in the specifications shall be executed strictly as per instructions of the Engineer.
- 2.10.4** 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.
- 2.10.5** The rate quoted shall be inclusive of cleaning the site of any vegetations, dressing and levelling etc., required for commencement of site activities. The rates shall also be inclusive of final micro grading before handing over. No separate payment will be made towards the same.
- 2.10.6** 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.
- 2.10.7** 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/ PVUN before procurement of bought out items/ building materials.
- 2.10.8** Rates shall be quoted both in figures and in words in clear legible writing. No over writing is allowed. All scoring and cancellation should be counter signed by the bidder. In case of illegibility, the interpretation of the engineer shall be final. All entries shall be in English language.
- 2.10.9** Engineers 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.
- 2.10.10** 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.
- 2.10.11** Mix design (M 20, M 25, M 30/M 35) for all concreting shall be carried out either at site or from a reputed approved 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. Bidder may use approved available

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Design Mix at site with approval of Engineer Incharge. Engineer Incharge decision shall be final and binding in this regard.

**2.10.12** The scope shall also include setting up by the bidder a testing laboratory (one AC lab size 4.5mtrx6mtr and 1 non AC lab 4.5 mtrx4.5 mtr.) in the field to carry out all relevant tests. Detail of laboratory equipments as per TCC is to be arranged by the contractor within quoted rate for conducting day to day one no. chemist to be deployed as necessary. The may tie up with approved/registered inspection agencies for setting up test lab at site as described above.

(i) Installation of necessary amenities- temporary infrastructure for construction activities at Project site locations- following are the minimum amenities to be provided by the bidder without any extra cost and removal/disposal of the same in environment friendly manner after its intended use/completion of complete scope of work:

1. Labour rest sheds near work spot.
2. Canteen facility creation.
3. Drinking water facility.
4. Labour toilets near work spot in sufficient nos. with regular cleaning & maintenance arrangement
5. First Aid Facility will be maintained by BHEL and it will be on cost sharing basis.
- 6 Labour colony should have all hygienic condition, dining hall, toilets, proper sewerage system, good drinking water arrangements.

**NOTE:** In case of non-compliance of above points, BHEL will make penal recoveries at the rate decided at site mutually by BHEL and contractor or as imposed by PVUNL.

**2.11** 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 (as applicable) shall be supplied by BHEL free of cost.

### **2.12 Following works shall be executed by other agency(Exclusion):**

**2.12.1** Dismantling of all over ground structures of existing plant in all areas identified for site levelling works in drawing no. 9585-001-POC-A-001 (Rev-D) titled "SITE LEVELLING PLAN".

**2.12.2** Removal/Dismantling of all underground structures of existing plant up to foundation level required for the facilities of New proposed plant.

**2.12.3** Dismantling of all underground structures of existing plant up to 1m depth below FGL in other areas identified in site levelling works drawing no. 9585-001-POC-A-001 (Rev-D) titled "SITE LEVELLING PLAN".

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2.12.4 Installation/ erection of factory fabricated structural steel.

2.12.5 Metal Side Cladding and M.S Deck Sheet work will be carried out by other agency.

### 2.13 **Hierarchy of Documents:**

In case of any conflict/deviations of technical specifications with regard to any work; amongst various documents, the order of precedence shall be as follows:

- (1) Statutory Regulations
- (2) PVUNL Technical Specifications / Section-C: Specific Technical Requirements
- (3) Items in Schedule of Quantities
- (4) IS standards
- (5) Section-D: General Technical Specifications

**The above hierarchy shall be followed strictly for technical requirements only to carry out works under the scope of this contract.**

### 2.14 **Construction Power(Chargeable):**

2.14.1 Construction Power shall be made available to the Contractor at 415 V feeders of LT substation located at Single point in the plant. Contractor shall be fully responsible to make all the arrangement beyond these LT feeder points for further distribution to meet all construction power requirements for the entire area in scope of this package.

2.14.2 Supply, erection, testing and commissioning of 415V switchboards, power and control cables, DC Systems etc. under the Contractor's scope. All necessary statutory requirements for charging construction power Contractor's network shall be in the Contractor's scope.

2.14.3 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. Capacitor Bank is to be arranged by vendor for power factor improvement of the system as per I. E. Rule.

2.14.4 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 equipment's 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.

2.14.5 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

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become necessary to relocate some of the installations to facilitate work by other agencies or by him.

- 2.14.6** 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.
- 2.14.7** 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.
- 2.14.8** 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.
- 2.14.9** 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.
- 2.14.10** The charges for the actual energy consumed by contractor shall be recovered on relevant rate of Discom and as specified in specification.

### **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 by use of suitable electrical equipments. 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.

### **2.15 Construction Water:**

Construction Water shall be arranged by contractor at his own cost during all stages of construction.

BHEL is making arrangement of construction water from PVUN resources, it may take few months for arrangement. Please note BHEL will give construction water at single location on chargeable basis. Distribution will be in bidder scope.

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**Note:** Due to any constraint at site if BHEL fails to provide construction water, contractor may have to arrange for construction water on its own. Any cost implication of the same shall be to the account of contractor and no extra payment shall be made for any such arrangements made by contractor (if required).

### **2.16 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/BHEL'S customer and as per field quality plan approved by BHEL/PVUNL. Contractor shall establish their own field quality lab and have tie-up with approved lab by BHEL/PVUNL in/outside of the plant if so required by BHEL/PVUNL.

### **2.17 Reconciliation of steel issued by BHEL (free of cost):**

#### **2.17.1 General Notes:**

- (a) All steel like structural steel, reinforcement bars, earthing rod/ GI flats, foundations bolts, MS rails **except MS/GI/SS Hand rails** as specified in relevant BOQ and shall be issued free of cost by BHEL unless specified otherwise in BOQ for use in the work covered in this contract from BHEL stores/storage yard. The contractor shall collect these materials from BHEL stores/store yard at specified places at his own cost and store the same at the work site or in his stores as per standard norms. Materials issued will be used only for construction of permanent works. **Procurement, supply, fabrication erection and painting of MS Handrails is in contractor scope.**
- (b) 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.
- (c) The contractor shall take care of material issued by BHEL and shall protect the same from damage and weathering. Contractor shall construct waterproof cement store (**capacity minimum 750 MT/ 15000 Bags**) for storing and stacking of cement **issued by BHEL free of cost.**
- (d) 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.
- (e) 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.
- (f) 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

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reconciliation of steel shall be final. The detailed reconciliation (dia. Wise or as required) shall be done **at least once in three months (03) or before submission of final bill which comes earlier.**

- (g) 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.
- (h) The contractor shall solely be responsible for the safety & security of material after it is handed over and issued to contractor by the BHEL.
- (i) 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.

### **2.18 HANDLING OF MATERIALS ISSUED BY BHEL:**

**2.18.1** Materials shall be issued by BHEL based on the weightment 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 document/LR received with the consignment. In such cases, Contractor shall do unloading of materials from trucks/lorry at their own cost.

**2.18.2** 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.

**2.18.3** 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's to safeguard all such materials in his custody. Materials issued will be used only for construction

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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 occur rendering the same unusable, then such quantity of steel shall be recovered from the interim payment at the penal rate specified in the tender.**

### **2.19 Issue of cement free of cost:**

- 2.19.1** Cement is issued through Bag being supplied from manufacturer/stockiest; the same shall be stored in cement stores of batching plant and necessary assistance shall be provided by contractor.
- 2.19.2** Contractor to note that batching plant being established at site shall have minimum **cement Storage shed of 750 MT capacities.**
- 2.19.3** Cement is issued through bags as received from the manufacturer/stockiest. 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.
- 2.19.4** 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.
- 2.19.5** **In case BHEL supplies cement through Bulker, Bidder has to store cement in Silos of Suitable capacities as decided by Engineer in charge. Silos Capacities shall be finalized mutually.**

BHEL will not issue cement free of cost for factory made Product/BOI like Fly Ash Brick, Paver Block, Tiles, Hume Pipe etc. unless specified otherwise.

### **2.20 ISSUE OF STEEL.**

- 2.20.1** The steel shall be issued to the contractor on the following basis:
  - i. Structural Steel: Weight basis (Unit – MT)
  - ii. Reinforcement Steel and Earthing Rod: Weight basis (Unit-MT)
  - iii. MS Rails: Weight Basis (Unit-MT)
- 2.20.2** All the steel (structural, reinforcement, earthing rod/GI flats, GI foundation bolts, etc) 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, fabrication drawings, 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.

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## Chapter – II: Scope of Works and Technical Specifications

Sr No	Name of Standard	Name of Section
1	IS: 808-1964	Beams, Channels and Angles
2	IS: 1730-1961	Plates, Sheets and Strips/Flats
3	BS4-1: 1993	UB/UC sections
4	IS: 12778/equivalence with EN-19-57	For NPB sections
5	IS: 12778/equivalence with EN-53-62	For HE/WPB sections
6	IS: 1786 or grade -1 of IS432 (Part-I)	Rounds including deformed high yield strength bars.

**In case any such sectional weights are not available in the above documents, the manufacturer recommendation shall be binding.**

- 2.20.3** 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.
- 2.20.4** 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.
- 2.20.5** The contractor shall submit to BHEL, a statement indicating estimated quantity of cement and 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.
- 2.20.6** Following 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).

SL No.	ISSUE OF MATERIALS	MAX QUANTITY IN CONTRACTORS STORE
01	Reinforcement steel, earthing rod/GI flat, Foundation bolt, MS Rails , as per BOQ	ONE MONTH
02	Structural Steel	ONE MONTH
03	Cement	ONE MONTH

- 2.20.7** Bidders shall ensure that no lamination material is taken over by them from BHEL.
- 2.20.8** The contractor must note that cement and 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.
- 2.20.9** Bidder to give requirement of Material in BHEL Scope well in advance of before Three month from requirement. Any delay in raising the requirement of these item leading to delay in placement of order, will be Contractor responsibility and its attributable delay in erection will be responsibility of Bidder only.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – II: Scope of Works and Technical Specifications

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### 2.21 RETURN OF MATERIALS

- 2.21.1 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 weightment basis.
- 2.21.2 Return of Reinforcement Steel and Structural 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. Return of such materials will not be entitled to any handling and incidental charges. 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. Scrap for reinforcement steel and structural steel shall be returned separately.

### 2.22 Scrap and Serviceable Materials:

- 2.22.1** All structural steel of length above 2 M except M.S Plate shall be considered as **serviceable materials** provided the materials is in good and acceptable condition. Structural steel in length less than 2 M Shall be treated as scrap.
- 2.22.2** Plates having both side greater than 1 Meter OR if any side is less than 1 M but greater than 0.5 M and the total area is equal or greater than 2 sq. Meter shall be considered as **serviceable material**.
- 2.22.3** All pipe measuring 2 M and above in length shall be treated serviceable materials provided they are in good and acceptable condition. Pipe in less than 2 M length shall be treated as Scrap.
- 2.22.4** All TMT measuring 3 M and above in length shall be treated as **serviceable material** provided they are in good acceptable condition. TMT in less than 3 M shall be treated as scrap.

### 2.23 Cement, Steel Consumption and wastage:

#### 2.23.1 **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”

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – II: Scope of Works and Technical Specifications

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attached to the DSR-2013 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. (No sweep cement will be taken back by BHEL).

### 2.23.2 Cement Wastage:

**2.23.2.1 Allowable wastage:** One and half percent (+1.5%) of theoretical consumption of cement.

**2.23.2.2** For any material 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
C-1	Theoretical consumption (without considering any wastage or loss).	Free
C-2	Actual consumption being Limited to one and half percent (+1.5%) of aforesaid theoretical consumption towards allowable wastage.	Free
C-3	Actual consumption beyond one and half percent (+1.5%) of above (C-1).	Penal rate

### 2.23.3 Reinforcement Steel, MS earthing rod, GI gratings, Foundation bolts and MS Rails 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.

**2.23.3.1** Actual consumption = Issue – Surplus.

**2.23.3.2** Surplus = un-tampered, unused, uncut QTY of steel **including serviceable material** returned by the contractor to BHEL store along-with relevant documents.

**2.23.3.3** Wastage = Actual consumption – Theoretical consumption.

### 2.23.4 Reinforcement Steel, MS earthing rod, Foundation bolts and MS Rails Wastage

**2.23.4.1 Allowable Wastage:** (+3%) of the theoretical consumption shall be considered as allowable wastage.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – II: Scope of Works and Technical Specifications

<b>Wastage and scrap shall be as per actual weighment basis.</b>		
<b>Sl no.</b>	<b>Reinforcement steel &amp; MS earthing rod</b>	<b>Basis of issue &amp; penal recovery</b>
R-1	Theoretical consumption (without considering wastage and scrap or loss)	Free
R-2	Wastage limited to <b>plus THREE</b> percent (+3%) of aforesaid theoretical consumption (R-1) towards allowable wastage.	Free
R-3	Wastage beyond <b>THREE</b> percent (+3%) of the theoretical consumption above (R-1).	Penal rate

### 2.23.5 Structural Steel (Rolled Sections and Plates etc.) Consumption

The theoretical consumption of various sections shall be based on approved drawings. Weights shall be calculated considering the sectional weights as per Indian standard. No extra shall payable to the contractor for any deviation in weights for the two different procedures adopted for issue and calculation of the theoretical consumption including rolling tolerances.

**2.23.5.1** Actual consumption = Issue – Surplus.

**2.23.5.2** Surplus = un-tempered, unused, uncut quantity of steel **including serviceable material** returned by the contractor to BHEL store.

**2.23.5.3** Wastage = Actual consumption – Theoretical consumption.

### 2.23.6 Structural Steel Wastage

**2.23.6.1 Allowable wastage:** 4% (FOUR percent) of the theoretical consumption shall be considered. Wastage shall be considered as cut pieces and scrap material, measured as per actual weighment basis. Invisible wastage, if any, shall be considered to be included in the specified 4 % allowable wastage.

<b>Sl no</b>	<b>Structural steel including SS plate</b>	<b>Basis of issue &amp; penal Recovery</b>
S-1	Theoretical consumption (without considering any wastage, scrap or loss) as per specification & drg.	Free
S-2	Wastage limited to <b>plus four</b> percent (+4%) of the aforesaid theoretical consumption (S-1) towards allowable wastage.	Free
S-3	Wastage beyond <b>four</b> percent (4%) of the aforesaid theoretical consumption (S-1).	Penal rate

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – II: Scope of Works and Technical Specifications

### 2.24 **Reconciliation of Materials:**

- 2.24.1** The contractor shall submit a reconciliation statement of cement and steel issued to the contractor with each RA Bill.
- 2.24.2** 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.
- 2.24.3** 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.
- 2.24.4** 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.

### 2.25 **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 if material Supply is in BHEL SCOPE:

Sl. No.	Item	Penal rate (Rs)
P-1	Cement (OPC/ PPC/ PSC).	6,500 per MT
P-2	Reinforcement steel and MS earthingrod/GI flat	65,000 per MT
P-3	Chequered Plates( if supplied by BHEL) and MS plates	65,000 per MT
P-4	MS Flats, beams, channel, angels etc. (Rolled Sections)	60,000 per MT
P-5	Foundation bolts if supplied by BHEL	90,000 per MT

### 2.26 **Procurement and Testing of Materials by Contractor:**

Material required for the entire job (other than issued by BHEL as explained above) like sand, aggregates, BHEL issued Cement, windows, doors, ventilators, rolling shutter, sanitary fixtures, painting & finishing material, all embedment's/inserts and all other material required for the completion of entire scope, has to be arranged by the contractor, except those specifically indicated as BHEL scope of supply. BHEL/ PVUNL reserves the right to reject any material not found satisfactory. Apart from the above, it shall be the responsibility of contractor to get materials procured from outside from approved vendors/source, should get laboratory approved by BHEL/PVUNL to ascertain the quality if insisted by BHEL/PVUNL.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – II: Scope of Works and Technical Specifications

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Rate 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/PVUNL representative.

***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 condition.***

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

Sh B. Majhi BHEL Site Office 3x800 MW PVUNL Patrattu STPS Email: <a href="mailto:bmajhi@bhel.in">bmajhi@bhel.in</a> Ph no: +91-9427506341	Sh Gopal Tiwary PSWR Nagpur Email: <a href="mailto:gopalt@bhel.in">gopalt@bhel.in</a> Ph no: +91-9881718378
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# TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

Sl. No.	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.1	<b>ESTABLISHMENT</b>			
3.1.1	<b>FOR CONSTRUCTION PURPOSE:</b>			
a	Open space for office (as per availability)	Yes		BHEL may provide free of charge limited open space for office and store as and where made available by its customer. Also refer clause no. 3.9.2
b	Open space for storage (as per availability)	Yes		
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	Firefighting equipments like buckets, extinguishers etc		Yes	
g	Fencing of storage area, office, canteen etc of the bidder		Yes	
3.1.2	<b>FOR LIVING PURPOSES OF THE BIDDER</b>			
a	Open space for labour colony (as per availability)		Yes	
b	Labour Colony with internal roads, sanitation, complying with statutory requirements		Yes	
3.2.0	<b>ELECTRICITY</b>			
3.2.1	<b>Electricity for construction 415 V (To be specified whether chargeable or free)</b>			

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

Sl. No.	Description <b>PART I</b>	Scope / to be taken care by		Remarks
		BHEL	Bidder	
a	Single point source of 415 V	Yes		<b>Chargeable.</b> Bidder to make its own arrangement of distribution of electricity at its own cost.
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	<b>Electricity for the office, stores, canteen etc of the bidder (to be specified whether chargeable or free)</b>			
a	Single point source		Yes	
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	<b>Electricity for living accommodation of the bidder's staff, engineers, supervisors etc</b>		Yes	Contractor has to make his own arrangement.
a	Single point source		Yes	
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.3.0	<b>WATER SUPPLY</b>			
3.3.1	<b>For construction purposes: (to be specified whether chargeable or free)</b>			
a	Making the water available at single point	Yes		Chargeable. Please refer clause 2.15

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – III: Facilities in the scope of Contractor/BHEL**

Sl. No.	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
	<b>PART I</b>			
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.2	<b><u>Water supply for bidder's office, stores, canteen etc</u></b>			
a	Making the water available at single point		Yes	
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.3	<b><u>Water supply for Living Purpose</u></b>			Contractor has to make his own arrangement.
a	Making the water available at single point		Yes	
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.4.0	<b>LIGHTING</b>			
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	
3.5.0	<b>COMMUNICATION FACILITIES FOR SITE OPERATIONS OF THE BIDDER</b>			
a	Téléphone, fax, internet, intranet, e-mail etc.		Yes	

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

Sl. No.	Description <b>PART I</b>	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.6.0	<b>COMPRESSED AIR wherever required for the work</b>		Yes	
3.7.0	<b>Demobilization of all the above facilities</b>		<b>YES</b>	
3.8.0	<b>TRANSPORTATION</b>			
a	For site personnel of the bidder		Yes	
b	For bidder's equipments and consumables (T&P, Consumables etc)		Yes	

Sl.No.	Description <b>PART II</b> <b>3.9.0 ERECTION FACILITIES</b>	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.9.1	Engineering works for construction:			NOT APPLICABLE
a	Providing the erection/constructions drawings for all the equipment covered under this scope	Yes		
b	Drawings for construction methods	Yes	Yes	In consultation with BHEL
c	As-built drawings – where ever deviations observed and executed and also based on the decisions taken at site-example – routing of small bore pipes		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	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 Sl No. e		Yes	In consultation with BHEL
h	Daily erection / work plan based on Sl No. g		Yes	In consultation with BHEL

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

Sl.No.	Description <b>PART II</b> <b>3.9.0 ERECTION FACILITIES</b>	Scope / to be taken care by		Remarks
		BHEL	Bidder	
i	Periodic visit of the senior official of the bidder to site to review the progress so that works are 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			NOT APPLICABLE
k	Laying of racks for gantry crane if provided by BHEL or brought by the contractor/bidder himself			NOT APPLICABLE
L	Arranging the materials required for preassembly			NOT APPLICABLE

**3.9.2** BHEL may provide free of charge limited open space, for office & storage shed, as and where made available by Customer (PVUN). It is the responsibility of the contractor to construct sheds, provide all utilities and dismantle and clear the site after completion of work or as and when required, as a part of his scope of work.

**Note:** Due to space constraint at site, contractor may have to arrange for open space for Batching Plant, Storage Area etc. outside the plant premises. Any cost implication of the same shall be to the account of contractor and no extra payment shall be made for any such arrangements made by contractor (if required).

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

### 4.1 Tools & Plants:

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

Sl. No.	Description of T&P	Quantity
1	Concrete batching plant (30 Cum/Hr)	01 Nos
2	Concrete Pump (75 Cum/Hr min capacity & lift 60M)	01 Nos
3	Concrete Transit Mixer	03 Nos
4	Concrete Boom placer	As per Requirement
5	Electrical Winch (of required capacity)	02 Nos
6	Vibrators (electrical/diesel)	10 Nos.
7	Air Compressor/ Air Blowers	1 Nos
8	Concrete Breaker (HILTI/STANLEY) –	3 Nos
9	Welding Machine	03 Nos
10	Self-priming Dewatering pump of various capacity (Diesel/Electric) From 3HP to 10 HP	6 Nos
11	Curing / dewatering pump – 1.5 / 2 HP	05 Nos
12	Hydraulic Excavator /Poclain	02 Nos
13	Hydraulic Excavator with Rock Breaker Attachment	01 Nos
14	JCB	02 Nos
15	Crane (14 T cap)	01 No
16	Trailer (20 MT Cap)	01 No
17	Tractor mounted Grader/Loader	02 Nos
18	<ul style="list-style-type: none"> <li>• Ply Shuttering board with adequate supporting structure – (Old steel shuttering plates will not be allowed).</li> <li>• Steel shuttering (fare face)</li> </ul>	Lot (As per requirement)
19	<ul style="list-style-type: none"> <li>• Pipe Scaffolding, Clamps / Swivel Couplers (One/Two Way), Props, Jacks, Screw Nos, MS Pipes, Wooden Battens, Planks, Bullies, H Frames, Tie Rods with Nuts, Adjustable Acro Span (Considering Individual Areas)</li> </ul>	As per requirement.
20	Dumper	06 Nos
21	Engineered Formwork System (for TG Deck)	01 Set
22	Reinforcement bending machine	02 Nos
23	Reinforcement cutting machine	02 Nos
24	MS scaffolding pipe with matching Couplers	4000 RM
25	Plate Compactor	02 Nos
26	Total Station	01 Nos
27	Auto level & staff	02 Nos

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

Sl. No.	Description of T&P	Quantity
28	Mini Vibro Roller	As per Requirement
29	Vibro roller 10-12MT	As per Requirement
30	Water Tanker	02 Nos
31	<b>Man lift crane of Minimum 20 mtr reach</b>	As per requirement
32	<b>Ready-made Pre-Engineered cup lock stair case as mentioned in note</b>	01
33	All Equipment for area lighting like Halogen bulbs and Portable Light Towers etc for General Area Illumination	As per requirement
34	COMPUTER with printing/photocopying & CD writing facility	5 sets
35	COMMUNICATION Facilities – Landline, WLL, Mobile, FAX, etc.	As per requirement
36	<b><u>DG Set – 2 nos, Capacity 125 KVA</u></b>	
37	<b><u>Water sprinkler- 1 no , water sprinkling on daily basis</u></b>	

### 4.2 Measuring and Monitoring Devices (MMD)

To be finalized at site as per requirement.

**4.3 Computer Infrastructure:** The successful bidder(s) will have to establish computerized project management system along with Two no Diploma in Civil Supervisor with sufficient computer knowledge (knowledge of MS office) and the following are the minimum requirements of the system:

4.3.1 The bidder will have to install 1nos 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 no 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 for exclusive use of BHEL.

4.3.2 Computer/printer along with technical (civil diploma) shall remain contractor's property/ownership for all legal/technical purposes; however, contractor shall be allowed to take out/release the same after completion of the site works. Further, the computer/printer along with two nos technical supervisor shall remain/work at BHEL offices.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

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- 4.3.3 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 schedule and site supervision etc.
- 4.3.4 This facility has to be provided from 1st 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.
- 4.3.5 **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 10000.00 per month for one computers with printer facility, if the services of computer and printer are being used by BHEL.**
- 4.3.6 **If Contractor fails to mobilize above computer infrastructure BHEL reserve the right to recover from Bidder at the rate of Rs 15000 per Month.**

### NOTE:

**This above list is only indicative and neither exhaustive nor limiting. Quantities indicated above are only the minimum required. Contractor shall deploy all necessary T&P to meet the schedules & as prescribed by BHEL engineer and required for completion of work.**

**Please note special arrangement has to be done for TG Raft & TG Deck RCC 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 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 40 Mtr 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**

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**5.1 BHEL WILL NOT PROVIDE ANY T&P's FOR THIS WORK.**

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – VI: TIME SCHEDULE

### 6.0 Time Schedule and Mobilization:

#### 6.1 Initial Mobilization and Time Schedule:

After issuance of LOI (through email/fax/courier), Contractor shall report to the GM (Patratu)/Construction Manager of BHEL at site or Project Manager of BHEL at HQ Nagpur within 15 days and make KOM (Kick of Meeting) for mobilization of manpower, T&P, 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 (35) Thirty-Four months** in a manner required by BHEL to match with the project schedule.

**Date of start (DOS) of works shall be reckoned as 15 Days after date of Issuance of LOI (Letter of Intent). However, the date of start may be reviewed and changed accordingly by Construction Manager/Site-in-Charge/Project Manager of BHEL with recorded reasons in the KOM (Kick of Meeting).**

#### 6.2 Contract Period and 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 & released for erection by other agency.

Sl No.	Activity	Period of release of fronts from DOS
1.	Power House foundations	08 Months
2.	Completion of TG Raft	05 Months
3.	Completion of TG Top Deck	12 Months
4.	Completion of Hot Box Foundation	14 Month
5.	Completion of 18 Mtr AB Bay floor slab	15 Month
6.	Completion of 9 Mtr AB Bay floor slab	18 Month
7.	Completion of 18 Mtr BC Bay floor slab	21 Month
8.	Completion of 28 Mtr BC Bay floor slab	22 Month
9.	Completion of 9 Mtr BC Bay floor slab	23 Month
10.	Completion of BC Bay Floor Slabs	14 Months
11.	Readiness of Transformer Foundations (GT/ST/UAT)	28 Months
12.	Pipe/Cable Rack	14 Months
13.	Miscellaneous Civil Works including Road, Drain Paving Finishing work etc.	35 Months

# 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	Period of release of fronts from DOS
M1	Completion of TG Top Deck (Sl No 3)	12 <sup>th</sup> Month
M2	Readiness of Transformer Foundation (Sl No 11)	28 <sup>th</sup> 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.
- Contractor shall note that individual milestones as above shall be achieved as per schedule furnished above.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – VII: TERMS OF PAYMENT

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### **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.*

Few points of consideration are as below:

7.1.1 The measurements sheets of work done in a month shall be submitted in triplicate duly agreed/signed by BHEL Engineer. The contractor shall extend all necessary assistance for verification of measurements of works without any extra cost.

7.1.2 The RA bill payments are interim payments and bills shall be submitted in prescribed formats.

7.1.3 **BHEL** will release payment through **Electronic Fund Transfer (EFT)/RTGS**.

7.1.4 Final bill shall be submitted after completion of works and upon material reconciliation along with all prescribed formats.

**7.2** 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 Extra/Supplementary items of work:**

The works shall be regulated as per clause no 2.15 and clause no 2.16 of General Conditions of Contract.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter-VIII: Taxes and Other Duties

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### 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

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### 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

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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

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

SL. NO	DOCUMENTS
2.	<b>Section C:</b> Specific Technical Specification
3.	<b>Section D:</b> General Technical Specification

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## CHAPTER X – Tentative Manpower Requirements

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### 10.0 Tentative Manpower Requirements:

- (a) **Project manager – 01** with adequate experience of minimum 15Years in Industrial Foundation, Building & Structural Works, Power Plant Civil & architectural Works.
- (b) Civil Engineers having experience of 800 MW TG Column & Deck – 01 heads
- (c) Experienced Civil Engineers: 03 Head
- (d) Experienced Foreman / Supervisors – 6heads
- (e) Planning & Billing Engineer – 01 heads (**Min 2 heads including documentation**)
- (f) Stores, Gate Pass – 01 heads
- (g) Accounts & Administration- 01 head
- (h) Quality Control Engineer/Chemist – 01 head (**min 2 head including one supervisor**)
- (i) Safety Engineer (officer) – 01 head (**min 2 head including 1 safety supervisor**)
- (j) Surveyor – 02 heads capable to handle total station
- (k) Operator, Licensed Electrician, Mechanic - As per requirement
- (l) Experienced Carpenters & Helpers – lot for similar nature of work
- (m) Experienced Bar Benders & Helpers – lot for similar nature of work.
- (n) Security Guards (Round The Clock) – As per requirement

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 & liaison etc are to be provided as per site requirement and not considered above.**

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 In case bidder fails to engage experience engineer for 800 MW TG Deck and Column construction BHEL will engage it and deduct monthly charge of Rs 80,000 per month.

The contractor should also submit the fitness/calibration certificate for T&Ps regularly and renew 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

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

<b>CONTENTS</b>	
Description	Remarks
<b>PART A:</b> Instructions to the Bidders	Instructions
<b>PART B:</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)
<b>PART C:</b> Total Lump Sum Price for entire scope of Work	This part is implanted in the E- Procurement portal entitled as “ <b>Part-C of Vol-II Price Bid</b> ”.

**Part A: Instructions to the Bidders**

- 1. Bidders shall quote Total Lump-sum Price for the entire scope of work for Package-A (Unit#02) only 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**’-3001/3002.