

E-TENDER SPECIFICATION

No. BHE/PW/PUR/RGEM1-ESP R&M-BAL-CIVIL/3281

Scope of Work: Balance Civil, Structural & Architectural Works of 3x500 MW (Stage-II) NTPC Ramagundam ESP R&M Project.

VOLUME I - TECHNICAL BID

THIS TENDER SPECIFICATION CONSISTS OF:

Notice Inviting Tender	
Volume-IA	Technical Conditions of Contract
Volume-IB	Special conditions of Contract
Volume-IC	General conditions of Contract
Volume-ID	Forms & Procedures
Volume-IE	Technical Annexures
Volume II	Price Bid



CONTENTS		
Volume No	Description	Hosted in website bhel.com (Briefly) and detailed in BHEL e-Procurement Portal as files titled
NIL	Tender Specification Issue Details	(Part of <u>Vol-IA-3281</u>)
NIL	Notice Inviting Tender	(Part of <u>Vol-IA-3281</u>)
I-A	Technical Conditions of Contract	Vol-I-A-3281
I-B	Special Conditions of Contract	Vol-I-BCD-3281
I-C	General Conditions of Contract	(Part of Vol-I-BCD-3281)
I-D	Forms & Procedures	(Part of Vol-I-BCD-3281)
II	Price Bid Specification as specified in E-Procurement Portal	Volume-II-Price Bid-3281

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

E-TENDER SPECIFICATION

No. BHE/PW/PUR/RGEM1-ESP R&M-BAL-CIVIL/3281

Scope of Work: Balance Civil, Structural & Architectural Works of 3x500 MW (Stage-II)
NTPC Ramagundam ESP R&M Project

EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

LAST DATE FOR TENDER SUBMISSION Refer Notice Inviting Tender .

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

M/s.

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PLEASE NOTE:
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

GM (Purchase)

Place: Nagpur
Date:

3281

NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



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Date: 27-08-2026

NOTICE INVITING TENDER (NIT)
NOTE: BIDDER MAY DOWNLOAD FROM WEB SITES

To,

Dear Sir/Madam,

Sub : **NOTICE INVITING E-TENDER**

Sealed offers in two part bid system (National competitive bidding (NCB) or ~~International Competitive Bidding (ICB)~~ are invited from reputed & experienced bidders (meeting **PRE QUALIFICATION CRITERIA** as mentioned in Annexure-1) through E-Procurement Portal <https://eprocurebhel.co.in> only, for the subject job by the undersigned on the behalf of BHARAT HEAVY ELECTRICALS LIMITED as per the tender document. Following points relevant to the tender may please be noted and complied with.

1.0 Salient Features of NIT

S No.	ISSUE	DESCRIPTION	
i	TENDER NUMBER	BHE/PW/PUR/RGEM1-ESP R&M-BAL-CIVIL/3281	
ii	Broad Scope of job	Balance Civil, Structural & Architectural Works of 3x500 MW (Stage-II) NTPC Ramagundam ESP R&M Project	
iii	DETAILS OF TENDER DOCUMENT		
A	Volume-IA	Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc.	Applicable
B	Volume-IB	Special Conditions of Contract (SCC)	Applicable
C	Volume-IC	General Conditions of Contract (GCC)	Applicable
D	Volume-ID	Forms and Procedures	Applicable
E	Volume-IE	Technical Annexures	Applicable
F	Volume-II	Price Schedule (Absolute value).	Applicable
iv	Issue of Tender Documents	Tender documents will be available for downloading from BHEL website (www.bhel.com) or e-procurement portal (https://eprocurebhel.co.in) as per schedule below: Start: 27/08/2026, Time :14:00 Hrs Closes: 07/09/2026, Time: 13:00 Hrs Brief information of the tenders shall also be available at central public procurement portal. (https://eprocure.gov.in/epublish/app)	Applicable
v	DUE DATE & TIME OF OFFER SUBMISSION	Date: 07/09/2026, Time :13:00 Hrs The bidder should submit their offer online only in e-	Applicable

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S No.	ISSUE	DESCRIPTION	
		Procurement portal at https://eprocurebhel.co.in <u>Bidders are requested to upload their offer well in advance in order to avoid last minute congestion at this website.</u> Hard copy bid or bids through E-mail / fax shall not be accepted.	
vi	OPENING OF TENDER (Techno-Commercial Bid)	Date: 07/09/2026, Time: 17:00 Hrs 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) Bidder may depute representative to witness the opening of tender. For e-Tender, Bidder may witness the opening of tender through e-Procurement portal only.	Applicable
vii	EMD AMOUNT	Rs. 2,00,000/- (Rupees Two Lakhs Only) 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	Applicable
viii	COST OF TENDER	NIL	Not Applicable
ix	LAST DATE FOR SEEKING CLARIFICATION	One day before due date of offer submission. Along with soft version also, addressing to undersigned & to others as per contact address given below: 1) Name: Biraj Roy Designation: Sr.Manager Deptt: Purchase Address: Floor no. 5 & 6,Shree Mohini Complex, 345 Kingsway, Nagpur-440001 Mobile-9587886706 Email : biraj@bhel.in 2) Name: Varun Vaidya Designation: Manager Deptt: Purchase Address: Floor no. 5 & 6,Shree Mohini Complex, 345 Kingsway, Nagpur-440001 Mobile-9792334127 Email : vvaidya@bhel.in 3) Mr. VK Arya Designation: GM	Applicable

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S No.	ISSUE	DESCRIPTION	
		Deptt: Purchase Address: Floor no. 5 & 6, Shree Mohini Complex, 345 Kingsway, Nagpur-440001 Email: vkarya@bhel.in	
x	SCHEDULE OF Pre Bid Discussion (PBD)	---	<i>Not Applicable</i>
xi	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)	1) Dr. Sarat Kumar Acharya, Ex-CMD, NLC 2) Shri R. Mukundan, IRPS (Retd.) 3) Shri Madan Lal Meena, IAS (Retd.)	<i>Not Applicable</i>
xii	Latest updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage (www.bhel.com -->Tender Notifications →View Corrigendum), & on e-tender portal https://eprocurebhel.co.in and not in the newspapers. Bidders to keep themselves updated with all such information.	

2.0 The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, duly signed digitally using Class III DSC & uploaded in E-Procurement Portal, 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 Not Used

4.0 Unless specifically stated otherwise, bidder shall deposit EMD as per clause 1.9 of General Conditions of Contract.

For Electronic Fund Transfer the details are as below:-

NAME OF THE BENEFICIARY	BHARAT HEAVY ELECTRICALS LTD
ADDRESS OF THE COMPANY	5th Floor, SHREE MOHINI COMPLEX 345, KINGSWAY, NAGPUR
NAME OF BANK	STATE BANK OF INDIA
NAME OF BANK BRANCH AND BRANCH CODE	SBI, NAGPUR MAIN BRANCH , CODE-00432
CITY	NAGPUR
ACCOUNT NUMBER	40227423158
ACCOUNT TYPE	MC-C C Clean (C&I)
IFSC CODE OF THE BENEFICIARY BANK BRANCH	SBIN0000432
MICR CODE OF THE BANK BRANCH	440002002

(Note -: In case of E-Tenders, proof of remittance of EMD should be uploaded in the E-Procurement Portal and originals, as applicable, shall be sent to the officer inviting tender within a reasonable time, failing which the offer is liable to be rejected.

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(Note -: In case of E-Tenders, proof of remittance of EMD should be uploaded in the E-Procurement Portal and originals, as applicable, 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:

This is an E-tender floated online through our E-Procurement Site (<https://eprocarebhel.co.in>). The bidder should respond by submitting their offer online only in our e-Procurement platform at (<https://eprocarebhel.co.in>). Offers are invited in two-parts only.

Documents Comprising the e-Tender

The tender shall be submitted online ONLY EXCEPT EMD (in physical form) as mentioned below:

a. Technical Tender (UN priced Tender)

All Technical details (e.g. Eligibility Criteria requested (as mentioned below)) should be attached in e-tendering module, failing which the tender stands invalid & may be REJECTED. Bidders shall furnish the following information along with technical tender (preferably in pdf format):

- i. Earnest Money Deposit (EMD) furnished in accordance with NIT Clause 4.0. ~~Alternatively, documentary evidence for claiming exemption as per clause 29 of NIT.~~
- ii. Technical Bid (without indicating any prices).

b. Price Bid:

- i. Prices are to be quoted in the attached Price Bid format online on e-tender portal.
- ii. The price should be quoted for the accounting unit indicated in the e-tender document.

Note:

- It is the responsibility of tenderer to go through the Tender document to ensure furnishing all required documents in addition to above, if any. Any deviation would result in REJECTION of tender and would not be considered at a later stage at any cost by BHEL.
- A person signing (manually or digitally) the tender form or any documents forming part of the contract on behalf of another shall be deemed to warrantee that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, cancel the contract and hold the signatory liable for all cost and damages.
- A tender, which does not fulfil any of the above requirements and/or gives evasive information/reply against any such requirement, shall be liable to be ignored and rejected.

DO NOT'S

Bidders are requested NOT to submit the hard copy of the Bid. In case offer is sent through hard copy/fax/telex/cable/electronically in place of e-tender, the same shall not be

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considered. Also, uploading of the price bid in prequalification bid or technical bid may **RESULT IN REJECTION** of the tender.

Digital Signing of e-Tender

Tenders shall be uploaded with all relevant PDF/zip format. The relevant tender documents should be uploaded by an authorized person having Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION digital signature certificate (DSC).

The Requirement:

1. A PC with Internet connectivity &
2. DSC (Digital Signature Certificate) (Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION)

BHEL has finalized the e-procurement service Provider:-
NIC PORTAL (<https://eprocurebhel.co.in>)

For E-PROCUREMENT ASSISTANCE & TRAINING, NIC PORTAL HELPDESK CONTACTS AS PER FOLLOWING:

For any technical related queries, please call at 24 x 7 Help Desk Number

0120-4001 002

0120-4200 462

0120-4001 005

0120-6277 787

1. Peter Raj, NIC, Ph: 9942069052

Email Support: support-eproc@nic.in

Other details/update yourself from : <https://eprocurebhel.co.in>

The process of utilizing e-procurement necessitates usage of **DSC (Digital Signature Certificate) (Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION)** and you are requested to procure the same immediately, if not presently available with you. Please note that only with DSC, you will be able to login the e-procurement secured site and take part in the tendering process.

The contact details of the DSC certifying authority:-
please refer <http://www.mca.gov.in/> →MCA SERVICES → DSC SERVICES

Vendors are requested to go through seller manual available on <https://eprocurebhel.co.in>.

~~**Procedure for Submission of Tenders (To be used in case of Paper bid only):** The Tenderers must submit their Tenders to Officer inviting Tender, as detailed below:~~

- ~~● PART-I consisting of 'PART-I A (Techno Commercial Bid)' & 'PART-I B (EMD)' in two separate sealed and superscribed envelopes (ENVELOPE-I & ENVELOPE-II)~~
 - ~~● PART-II (Price Bid) in sealed and superscribed envelope (ENVELOPE-III)~~
- ~~One set of tender documents shall be retained by the bidder for their reference~~

~~**6.0 The contents for ENVELOPES and the superscription for each sealed cover/Envelope are as given below. (All pages to be signed and stamped) (To be used in case of Paper bid only):**~~

Sl. no.	Description	Remarks
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Part-I A		
	<u>ENVELOPE - I superscribed as:</u> PART-I (TECHNO COMMERCIAL BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION: <u>CONTAINING THE FOLLOWING:-</u>	
i. —	Covering letter /Offer forwarding letter of Tenderer.	
ii. —	Duly filled-in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above. <u>Note:</u> a. In case of any deviation, the same should be submitted separately for technical & commercial parts, indicating respective clauses of tender against which deviation is taken by bidder. The list of such deviation shall be placed after document under sl no (i) above. 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 all documents as per above shall be indexed properly and credential certificates issued by clients shall distinctly bear the name of organization, contact ph. 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 - II (UNPRICED - without disclosing rates/price, but mentioning only 'QUOTED' or 'UNQUOTED' against each item	
xiii. —	Any other details preferred by bidder with proper indexing.	

PART-I B		
	<u>ENVELOPE - II superscribed as:</u> PART-I (EMD) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION: <u>CONTAINING THE FOLLOWING:-</u>	
	Earnest Money Deposit (EMD) in the form as indicated in this Tender	

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	PART-II	
	PRICE BID consisting of the following shall be enclosed	
	ENVELOPE-III superscribed as: PART-II (PRICE BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:	
	CONTAINING THE FOLLOWING	
i	Covering letter/Offer forwarding letter of Tenderer enclosed in Part-I	
ii	Volume II – PRICE BID (Duly Filled in Schedule of Rates – rate/price to be entered in words as well as figures)	

	OUTER COVER	
	ENVELOPE-IV (MAIN ENVELOPE / OUTER ENVELOPE) superscribed as: TECHNO-COMMERCIAL BID, PRICE BID & EMD TENDER NO: NAME OF WORK: PROJECT: DUE DATE OF SUBMISSION:	
	CONTAINING THE FOLLOWING:	
i	⊖ Envelopes I ⊖ Envelopes II ⊖ Envelopes III	

- **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 any in-complete documents.**

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 based on its 'LOAD and PERFORMANCE' and 'TURNOVER', as per the following:

- 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 last Month preceding the month corresponding to the 'latest date of bid submission', in the following manner -

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(Note: For example, if latest bid submission is in Jan 2026, then the 'load' shall be calculated up to and inclusive of Dec 2025)

Total number of LOAs in hand = Load (P)

Where 'P' is the sum of all LOAs under execution with BHEL Regions as on the cut off month defined above, excepting LOAs which are on Long Hold, or yet to start, or whose evaluation has been completed upto last month preceding the month corresponding to the 'latest date of bid submission'.

For example, if latest bid submission is in Jan 2026, then the

- i) LOA with start date in Dec-2025 shall be considered in Load.
- ii) LOA with finish date in Dec-2025 shall not be considered in Load.

- 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 2nd 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 2026, then the 'performance' shall be assessed for a 6 months' period up to and inclusive of Nov 2025 (i.e. from June 2025 to Nov 2025), for all the unit wise identified packages (refer Table I))

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

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

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

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package P₃, 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 = T₁ + T₂ + T₃ + T₄ + .. T_N)

- c) Sum 'S₁' of 'Monthly Performance Evaluation' Scores (S₁₋₁, S₁₋₂, S₁₋₃, S₁₋₄, S₁₋₅.... S_{1-T₁}) for similar package P₁, for the 'period of assessment' 'T₁' (i.e. S₁ = S₁₋₁+ S₁₋₂+ S₁₋₃+ S₁₋₄+ S₁₋₅+...S_{1-T₁}). Similarly, S₂ for package P₂ for period T₂, S₃ for package P₃ for period T₃ 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' = S₁+ S₂+ S₃+ S₄+ S₅+.... 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

= -----

Aggregate of months for each of the similar packages for which performance

should have been evaluated in all the Regions

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
(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 (Σ) of columns (iii) to (ix)

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

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

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

- 'Period of Assessment' i.e. 6 months preceding and including the cut-off month
- 12 months preceding and including the cut-off month
- 24 months preceding and including the cut-off month

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

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

Sl. no.	Overall Performance Rating (R_{BHEL})	Corresponding Value of 'L'
1	≥ 60 and < 62	NA
2	≥ 62	0.45

- iv). Performance Systems: The performance rating as mentioned in II (i) and (ii) above, shall be calculated as per Online Systems i.e. Contractor Performance Evaluation System (CPES) and Safety Performance Evaluation System (HSEPES). The scores assigned in HSEPES shall be scaled down to 10 and assigned in CPES against the category "HSE" (mentioned in Form F-15).

III. i) 'Assessment of Capacity based on 'LOAD and PERFORMANCE':

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

Max number of-LOA $P_{Max} = (R_{BHEL} - 60)$ 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 $R_{BHEL} \geq 60$ and < 62 , $P_{Max} = '5'$

The Bidder shall be considered 'Qualified' on 'Performance basis' 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)

- b) In addition to above, the contractor shall be considered disqualified for ongoing tender(s) of BHEL, in case contractor fails to obtain an overall average score of 6 or more than 6 (six) (in the scaled down scores of HSEPES) out of 10 considered for Performance Rating as per sl no II (ii), in a period of '6 months preceding and including the cut-off month'. The period of '6 months preceding and including the cut-off month' can be extended to 12 months and further to 24 months, to account for 'performance scores' for at least 6 'package months'. Bidders who did not qualify this condition shall not be considered under the provisions of clause 9 IV (iv) of NIT.

ii) Assessment of Capacity based on 'TURNOVER':

If the 'value of contracts in hand' across all PS Regions by a contractor is less than the product of "maximum of 'annual average turnover for last 3 years' or 'latest FY turnover' of the Contractor and multiplying factor", then such bidder shall be considered qualified on 'Annual Average Turnover basis'. The 'value of contracts

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in hand' will be computed by summing up "50% of the annualized awarded value of each contract" unless performance evaluation is not closed in the online CPES.

Based on the performance rating of the Contractor, the above mentioned multiplying factor shall be as below:

Sl. no.	Overall Performance Rating (R_{BHEL})	(Multiplying factor to Turnover)
1	<60	0
2	≥ 60 and ≤ 62	1.0
3	> 62 and ≤ 65	1.5
4	> 65 and ≤ 70	2.0
5	> 70 and ≤ 75	2.5
6	> 75 and ≤ 80	3.0
7	> 80	3.5

'Assessment of Capacity of Bidder':

The bidder will be considered qualified for the tender if it qualifies on 'Load and Performance basis' as well as on 'Average Annual Turnover basis'.

However, 'Consortium Partner' shall be considered qualified based on only 'Overall Performance Rating ≥ 60 ' (they will be regarded pre-qualified on other criteria).

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	iii). Others (Elect. and C&I)	iii). ESP
	iv). Electrical Enabling Works	

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foundations iv). Structural Steel Fabrication & Erection v). Chimney vi). Cooling Tower vii). Others (Civil)		iv). LP Piping v). Steam Turbine Generator set & Aux vi). Gas Turbine Generator set & Aux vii). Hydro Turbine Generator set & Aux viii). Turbo Blower (including Steam Turbine) ix). Material Management x). FGD xi). ACC xii). Others (Mechanical)
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- iii). Bidders who have not been evaluated for at least six package months in the last 24 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 LOA 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 24 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 tender conditions including ‘Assessment of Capacity of Bidders’. However, in case any evaluation scores are available in the last 24 months preceding and including the Cut-off month for a ‘First Timer’, the bidder shall be considered qualified only if the average of the available evaluation scores being ≥ 60 and qualified on other parameters i.e Load, HSE and Turnover.

- 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’, excluding the bidders disqualified on basis

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of HSE (as per Sl. No. III (b)), and for this, procedure described in following four options shall be followed:

- a) All the bidders having Overall Performance Rating (R_{BHEL}) ≥ 60 shall be considered qualified against criteria of 'Assessment of Capacity of Bidders'.
- b) If even after using option "a", the number of qualified bidders remains less than four, then in addition to bidders considered as per option "a", "First timer" bidders having average of available performance scores ≥ 60 upto and including the Cut Off month shall also be considered qualified against criteria of 'Assessment of Capacity of Bidders'.
- c) If even after using option "a" and "b", the number of qualified bidders remains less than four, then in addition to bidders considered as per option "a" and "b", "First timer" bidders for whom no performance score is available in the system upto and including the Cut Off month, shall also be considered qualified against criteria of 'Assessment of Capacity of Bidders'.
- d) If even after using option "a", "b" and "c" the number of qualified bidders remains less than four, remaining bidders shall be "listed" as per their descending order of Overall Performance Rating (R_{BHEL}) or average of available performance scores for "First timer" bidders upto and including the Cut Off month.

Bidders as per option "a", "b", "c" and additional top bidders as "listed" above shall be considered qualified against criteria of 'Assessment of Capacity of Bidders' to make the total numbers of qualified bidders as four.

In case, from the "listed" bidders, more than 1 "listed" bidder are having the same average performance score, then all such bidders shall be considered.

Example-

If 3 bidders are considered from "a", "b" and "c".

From remaining "listed" bidders, 3 top bidders have same average performance scores. Then all 3 "listed" bidders shall be considered.

Note:- In case, the number of bidders qualified against Technical and Financial Qualification criteria itself is less than four, then all bidders 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/ Turbo Blower Packages
 - b. Up to Steam Blowing in case of Boiler/ ESP/ Piping Packages
 - c. Up to Synchronization in all Balance Packages
- 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

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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 27th of Evaluation Month or 5 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.

Performance evaluation as specified above in this clause 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 and/or through e-procurement portal <https://eprocurebhel.co.in>, as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay or any other delays. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.

12.0 BHEL may decide holding of pre-bid discussion [PBD] with all intending bidders as per date indicated in the NIT. The bidder shall ensure participation for the same at the appointed time, date and place as may be decided by BHEL. Bidders shall plan their visit accordingly. The outcome of pre-bid discussion (PBD) shall also form part of tender.

13.0 In the event of any conflict between requirement of any clause of this specification/ documents/drawings/data sheets etc. or requirements of different codes/standards specified, the same to be brought to the knowledge of BHEL in writing for clarification before due date of seeking clarification (whichever is applicable), otherwise, interpretation by BHEL shall prevail. Any typing error/missing 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 signed by authorized signatory who signs in the offer), if applicable, along with techno-commercial bid. This pact shall be considered as a~~

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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.

“Integrity Pact (IP)”

- (a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ 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.

Sl. No.	IEM	Email
1.	Dr. Sarat Kumar Acharya, Ex-CMD, NLC	iem1@bhel.in
2.	Shri R. Mukundan, IRPS (Retd.)	iem2@bhel.in
3.	Shri Madan Lal Meena, IAS (Retd.)	iem3@bhel.in

- (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 the bidding. In other words, entering into this Pact would be a preliminary qualification.

- (c) Please refer Section-8 of 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 above 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:	Sh VK Arya /GM(Purchase)	Biraj Roy/ Sr.Manager (Purchase)
Dept:	Purchase Department	
Address:	Floor No. 5 & 6, Shreemohini Complex, 345 Kingsway, Nagpur-440001	
Email:	vkarya@bhel.in	biraj@bhel.in
Phone:	9587886706	

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.

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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 **Reverse Auction:** Applicable. “BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com (<https://www.bhel.com/guidelines-reverse-auction-2024>)).” for this tender. RA shall be conducted among all the techno-commercially qualified bidders.

Price Bids of all the techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of bidders in RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.

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.

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:

23.1 Prime Bidder and Consortium Partner or partners are required to enter into a consortium agreement for the said contract with a validity period of six months initially. In case bidder becomes L1, Consortium Agreement valid till contractual completion period shall be submitted to BHEL before signing the contract. Consortium Agreement shall be kept valid till scope of work awarded to consortium partner(s) as per contract is completed.

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) including Prime Bidder shall be NOT more than 3 (three).

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

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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 and BHEL shall take necessary action as per extant guidelines. 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 "Prime Bidder withdraws" or "insolvency / liquidation / winding up proceedings have been initiated / admitted against the Prime Bidder/ consortium bidders",

- consortium bids will be rejected
- BHEL reserves the right to cancel, terminate or short close the contract or take any other action to safeguard BHEL's interest in the Project / Contract. This action will be without prejudice to any other action that BHEL can take under Law and the Contract to safeguard interests of BHEL.

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 the scope of work of Consortium partner under direct order of BHEL, the Prime Bidder shall be eligible for becoming a 'standalone' bidder for works similar to that for which consortium partner was engaged, for subsequent tenders unless otherwise specifically mentioned elsewhere.

Execution for the scope of work of consortium partner shall mean:

- i. "BOILER LIGHT UP" in respect of Boiler/CFBC/ESP.
- ii. Achievement of physical Quantities as per respective PQRs in respect of Civil, Structures, Piling and CHP Civil.

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 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. However, Prime Bidder has also option for submission of SD on behalf of consortium partner (s).

SD submitted by Consortium Partner(s) may be released in case corresponding scope of work of the respective Consortium partner(s) has been completed upto the extent of 80% based on certification by Construction Manager and concurrence by the prime bidder.

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.

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- 24.0 The bidder shall submit/upload documents in support of possession of 'Qualifying Requirements' duly self-certified and stamped by the authorized signatory, indexed and properly linked in 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 The consultant / firm (and any of its affiliates) shall not be eligible to participate in tender(s) for the related works or services for the same project, if they were engaged for the consultancy services.
- 27.0 Guidelines/rules in respect of Suspension of Business dealings, Vendor evaluation format, Quality, Safety & HSE guidelines, Experience Certificate, etc. may undergo change from time to time and the latest one shall be followed. The abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' is available on www.bhel.com on "supplier registration page".
- 28.0 The offers of the bidders who are on the banned/ hold list and also the offer of the bidders, who engage the services of the banned/ hold firms, shall be rejected. The list of **banned/ hold firms** is available on BHEL web site www.bhel.com.

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

28.1.1 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.

28.1.2 Commitment by Bidder/ Supplier/ Contractor:

- (i) 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.
- (ii) 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 connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.
- (iii) 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 prices 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 extent guidelines of the company available on www.bhel.com and / or under applicable legal provisions.

29.0 ~~Micro and Small Enterprises (MSE)~~

~~Any Bidder falling under MSE category, shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.~~

Type under MSE	SC/ST owned	Women owned	Others (excluding SC/ ST & Women Owned)
Micro			

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Small			
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Note: – If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category.

a) MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS & DC, MSME) only if they submit along with the offer, attested copies of either Udyam Registration Certificate or EM-II certificate having deemed validity (five years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or Udyog Aadhar Memorandum (UAM) & Acknowledgement or EM-II Certificate along with attested copy of a CA certificate (format enclosed as Annexure – 3) 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 last date of Technical Bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for this enquiry if the above required documents are 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. Documents should be notarized or attested by a Gazetted officer. Documents submitted by the bidder may be verified by BHEL for rendering the applicable benefits.

30.0 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.

31.0 PREFERENCE TO MAKE IN INDIA:

For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/Non-Local Supplier and purchase preferences to Class I local supplier, is as defined I Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.

31.1 Compliance to Restrictions under Rule 144 (xi) of GFR 2017

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. The Competent Authority for the purpose of this Clause shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).
- II. “Bidder” (including the term ‘tenderer’, ‘consultant’ or ‘service provider’ in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. “Bidder from a country which shares a land border with India” for the purpose of this Clause means: -
 - a. An entity incorporated established or registered in such a country; or
 - b. A subsidiary of an entity incorporated established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or

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- f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.

IV. The beneficial owner for the purpose of (III) above will be as under:

- 1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation

- a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company.
 - b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.
- 2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership.
 - 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person has ownership of or entitlement to more than fifteen percent of the property or capital or profits of the such association or body of individuals.
 - 4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 - 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

VI. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Note:

- (i) The bidder shall provide undertaking for their compliance to this Clause, in the Format provided in **Annexure-11**.
- (ii) Registration of the bidder with Competent Authority should be valid at the time of submission as well as acceptance of the bids.

32.0 Bid should be free from correction, overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection.

All overwriting/cutting, etc., will be numbered by bid opening officials and announced during bid opening.

33.0 In the course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective L-1 bidders.

In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss/ draw of lots, in the presence of the respective L-1 bidder(s) or their representative(s).

Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding.

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34.0 The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). 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.

In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.

35.0 Grievance Redressal Mechanism: To promote transparency and ensure fair treatment of all bidders, a structured Grievance Redressal Mechanism is in place to address any concerns or issues arising during the tendering process.

Suppliers/Contractors are requested to follow the below escalation process for grievance resolution:

1. First Level: Any grievance should initially be addressed to the designated Dealing Officer, whose contact details are provided in the Notice Inviting Tender (NIT).

2. Second Level: If the issue remains unresolved, it may be escalated by lodging a formal grievance through the SUVIDHA Portal: <https://suvidha.bhel.in/suvidha/>. Responses will be provided in accordance with the defined escalation matrix.”

36.0 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
- 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/ circulars/ amendments/ govt. directives issued from time to time shall also be applicable.

For BHARAT HEAVY ELECTRICALS LTD

(General Manager - Purchase)

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Enclosure:

- 1.0** Annexure-1: Pre Qualifying Requirements.
- 2.0** Annexure-2: Check List.
- 3.0** ~~Annexure-3: Certificate by Chartered Accountant~~
- 4.0** Annexure-4: Reverse Auction Process Compliance Form
- 5.0** Annexure-5: Authorization of representative who will participate in the online Reverse Auction Process
- 6.0** Annexure-6: RA Price Confirmation and Breakup
- 7.0** Annexure-7: Integrity Pact
- 8.0** Annexure-8: Undertaking as per PQR C4 of Annexure-1 i.e. PQR
- 9.0** Annexure-9: Declaration reg. Related Firms & their areas of Activities
- 10.0** Annexure-10: Declaration regarding minimum local content
- 11.0** Annexure-11: Declaration regarding compliance to restrictions under rule 144 (xi) of GFR 2017
- 12.0** **Annexure 12: Important information.**
- 13.0** Annexure-13 Declaration/Undertaking regarding Conflict of Interest among Bidders

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ANNEXURE-1

PRE QUALIFYING CRITERIA

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JOB	Balance Civil, Structural & Architectural Works of 3x500 MW (Stage-II) NTPC Ramagundam ESP R&M Project		
S No	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Applicability	
A	Submission of Integrity Pact duly signed (if applicable) (Note: To be submitted by Prime Bidder & Consortium /Technical Tie up partner jointly in case Consortium bidding is permitted, otherwise by the sole bidder)	NOT Applicable	
B	<u>Technical PQR</u> Bidder shall essentially meet all the Qualifying Requirements i.e. (B.1.1 or B.1.2 or B.1.3) & (B.2.1 or B2.2) & B.3 as under, in the last seven years as on latest date of bid submission: B.1: Bidder should have Executed “Piling or Civil or Structure or ‘Civil and Structural Works’ or RCC Chimney or RCC Cooling Tower or RCC Silo or Mill Bunker or any combination of these works” for any one of the following in the last seven years from latest date of bid submission: B.1.1) Executed One work of value not less than Rs. 110 Lakhs against single work order. OR B.1.2) Executed Two works each of value not less than Rs. 69 Lakhs against maximum two work orders. OR B.1.3) Executed Three works each of value not less than Rs. 55 Lakhs against maximum three work orders. AND B.2.1: Bidder should have executed Reinforced Cement Concrete (RCC) quantities of at least 179 Cum in cumulative of maximum two running/completed contracts within a common period of “twelve consecutive months”. OR	Applicable	

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	B.2.2: Bidder should have executed Reinforced Cement Concrete (RCC) quantities of at least 119 Cum in a single running/completed contract within a common period of “twelve consecutive months”. AND B.3: Bidder should have executed any civil work in power plant / Industrial Project/Township work for any industrial project/ power plant.		
C-1	FINANCIAL TURNOVER Bidders must have achieved an average annual financial turnover (audited) of ₹ 41 Lakhs or more over last three Financial Years (FY) i.e. ‘2022-23 ,2023-24 & 2024-25’	Applicable	
C-2	NETWORTH (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.	Applicable	
C-3	PROFIT Bidder must have earned profit in any one of the Five Financial Years as applicable in the last Five Financial Years (“2020-21, 2021-22, 2022-23, 2023-24 & 2024-25’ as on date)”. Bidders to submit audited Balance sheet and Profit & Loss statement for the years as supporting documents.	Applicable	
C-4	Bidder must not be under Insolvency Resolution Process or Liquidation or Bankruptcy Code Proceedings (IBC) as on date, by NCLT or any adjudicating authority/authorities, which will render him ineligible for participation in this tender, and shall submit undertaking (Annexure-8) to this effect	Applicable	
D	Assessment of Capacity of Bidder to execute the work as per sl no 9 of NIT (if applicable) Applicable, The “Assessment of Capacity of Bidders” for this Tender shall be carried out by considering the identified packages i.e. “Civil Works including foundations” & “Structural Steel Fabrication & Erection”	Applicable	
E	Approval of Customer (if applicable)	Applicable	BY BHEL
F	Price Bid Opening Note: Price Bids of only those bidders shall be opened who stand qualified after compliance of criteria A to E		BY BHEL
G	Consortium tie-ups	Applicable	

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

Explanatory Notes for PQR B.1 (Technical)

1. The evaluation currency for this tender shall be INR.
2. For the criteria (B.1), actual executed value shall be considered.
3. 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-

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

Where

P = Updated value of work

R = Value of executed work

X_N = All India Avg. Consumer Price index for industrial workers for three months prior to the month of latest due date of bid submission (e.g. If latest bid submission date is 02-Mar-17, then bid submission month shall be reckoned as March'17 and index for Dec'2016 shall be considered).

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

Y_N = Monthly Whole Sale Price Index for All Commodities for 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'2016 shall be considered).

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

Explanatory Notes for Technical Criteria (B2):

1. VOID
2. Unless otherwise specified, for the purpose of "B2 Technical Criteria", the word 'EXECUTED' means achievement of milestones as defined below -
 - a. "ACHIEVEMENT OF PHYSICAL QUANTITIES" as per PQRs.
 - b. "READINESS FOR COAL FILLING" of at least one Bunker, in respect of Mill Bunker Structure.
 - c. "CHARGING" in respect of Power Transformers/ Bus Ducts/ "HT/LT Switchgears" / "HT/LT Cabling".
 - d. For C&I works: "SYNCHRONISATION" in case of power project (Excluding Nuclear Projects) / "WORK EXECUTION of the value as defined in PQR" in case of industry & Nuclear Projects.
 - e. "BOILER LIGHT UP" in respect of Boiler / CFBC / ESP.
 - f. "CHARGING OF ATLEAST ONE PASS" in respect of ESP(R&M)
 - g. "GAS IN" in respect of HRSG.
 - h. "STEAM BLOWING" in respect of Power Cycle Piping.
 - i. "HYDRAULIC TEST"/ ANY OTHER EQUIVALENT TEST LIKE "100% RT/UT OF WELDED

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- JOINTS” of the system in respect of Pressure parts/ LP Piping/CW Piping.
- j. “FULL LOAD OPERATION OF THE UNIT” in respect of Insulation work.
 - k. “SYNCHRONISATION” in respect of STG / GTG.
 - l. “SPINNING” in respect of HTG.
 - m. “GAS IN” in respect of FGD
3. Boiler means HRSG or WHRB or any other types of Steam Generator.
4. Power Cycle piping means Main Steam, Hot Reheat, Cold Reheat, HP Bypass.
5. 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, where ever 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.

Explanatory Notes for PQR -C (Financial):

C-1:

- i. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated against C-1 above.
- ii. Evaluation of Turnover criteria shall be calculated from the Audited Balance Sheet and Profit & Loss Account for the three Financial Years (FY).
- iii. 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.
- iv. 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.

C-2: Net Worth (Only in case of companies) of the bidder should be positive.

Note: Net worth shall be calculated based on the latest Audited Accounts as furnished for ‘C-1’ above.

Net worth = Paid up share capital + Reserves

C-3: Bidder must have earned profit in any one of the **Five** financial years as applicable in the last **Five** financial years as furnished for ‘C-1’ above.

Note: PROFIT shall be PBT earned during any one year of last **Five** financial years as in ‘C-1’ above.

C-4: 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.

Common Explanatory Notes:

- 1. For evaluation of PQR, in case Bidder alone does not meet the pre-qualifying technical criteria B1 above, bidder may utilize the experience of its Parent/ Subsidiary Company along with its own experience, subject to following:
 - a. The parent company shall have a controlling stake of $\geq 50\%$ in the subsidiary company (as per Format-1).

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- b. The Parent Company/ Subsidiary Company of which experience is being utilized for bidding shall submit Security Deposit(SD) equivalent to 1% of the total contract value
 - c. The parent/ subsidiary company and bidder shall provide an undertaking that they are jointly or severally responsible for successful performance of the contract (as per Format-2).
 - d. In case Bidder is submitting bid as a Consortium Partner, option of utilizing experience of parent/subsidiary Company can be availed by Prime Bidder only.
 - e. Parent Company/ Subsidiary Company of which experience is being used for bidding, cannot participate as a 'Standalone Bidder' or as a 'Consortium bidder'.
2. Completion date for achievement of the technical criteria specified in the 'B' above should be in the last 7 years ending on the 'latest date of Bid Submission' of Tender irrespective of date of the start of work. Completion date shall be reckoned from the "Financial Year quarter of bid submission". (for e.g. -Work completed on 01.01.2014 shall be considered even if latest date of bid submission is 20.03.2021).
3. "Executed" means the bidder should have achieved the technical criteria specified in the Common QR even if the Contract has not been completed or closed.
4. In case the Experience/PO/WO certificate enclosed by bidders do not have separate break up of prices for the E&C portion for Electrical and C&I works (i.e. the certificates enclosed are for composite order for supply and erection of Electrical and C&I and other works if any), then value of Erection & Commissioning for the Electrical and C&I portion shall be considered as 15% of the price for supply & erection of Electrical and C&I.
5. Following shall be complied with in case of consortium:
- a. The Prime Bidder and Consortium Partner(s) are required to enter in to a consortium agreement and certify to BHEL regarding existence and validity of their consortium agreement in line with validity period mentioned in NIT.
 - b. Prime Bidder and Consortium partners shall be approved by Customer for being considered for the tender (applicable if customer approval is required).
 - c. Number of partners including prime Bidder shall be NOT more than 3 (three).
 - d. Prime Bidder alone shall necessarily comply with "B1 Technical Criteria" except for mechanical package where B1 criteria is not applicable.
 - e. Prime Bidder and Consortium Partner shall together comply with the 'Pre-Qualification Requirements' specified for the respective category of technical requirement as per "B2 technical criteria".
 - f. Prime Bidder shall comply with all other Pre Qualifying criteria for the Tender unless otherwise specified.
 - g. All other conditions shall be read in conjunction with clause no 23.0 of NIT.
 - h. Prime Bidder shall be the Bidder who has a major share of work.
 - i. Prime Bidder shall be responsible for the overall execution of the Contract.
 - j. Performance shall be evaluated for Prime Bidder and the Consortium partner for their respective scope of work.
 - k. In case the Consortium partner backs out, another consortium partner meeting the QRs, has to be engaged by Prime Bidder and if not, the respective work will be

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.....
withdrawn and executed on risk and cost basis of the prime bidder.

- l. In case Prime Bidder withdraws or insolvency / liquidation / winding up proceedings have been initiated / admitted against the Prime Bidder, BHEL reserves the right to cancel, terminate or short close the contract or take any other action to safeguard BHEL's interest in the Project / Contract. This action will be without prejudice to any other action that BHEL can take under Law and the Contract to safeguard interests of BHEL
- m. After successful execution of one work with a consortium partner under direct orders of BHEL, the Prime Bidder shall be eligible for becoming a 'standalone' bidder for works similar to that for which consortium partner was engaged, for subsequent tenders.
- n. The Consortium partner shall submit SD equivalent to 1% of the total contract value in addition to the SD to be submitted by the Prime Bidder for the total contract value.

BIDDER SHALL SUBMIT ABOVE PRE-QUALIFICATION CRITERIA FORMAT, DULY FILLED-IN, SPECIFYING RESPECTIVE ANNEXURE NUMBER AGAINST EACH CRITERIA AND FURNISH RELEVANT DOCUMENT INCLUSIVE OF WORK ORDER AND WORK COMPLETION CERTIFICATE ETC IN THE RESPECTIVE ANNEXURES IN THEIR OFFER.

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 extant guidelines for Suspension of Business Dealings.

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Format-1

Certificate for relationship between Parent Company / Subsidiary Company and the bidder

To,

.....

.....

Dear Sir,

Sub: Bid for NIT Nodated..... for "....." (name of the tender).

We hereby certify that M/s..... is Parent Company/ Subsidiary Company of M/s.....(the bidder) and details of equity holding of the Parent Company in Subsidiary Company as on(not earlier than seven days prior to the Bid Submission Date) are given as below:

Name of Parent Company	Name of Subsidiary Company	Percentage of Equity Holding of Parent Company in Subsidiary Company

(Insert Name and Signature of Statutory Auditor or practicing Company Secretary of the Bidder)

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Format-2

**Undertaking from the Parent Company/ Subsidiary Company of the bidder
(On the Letter Head of Parent Company/ Subsidiary Company, as applicable)**

From,
Name:
Full Address:

Telephone No.:
E-mail address:
Fax/No.:

To,

Dear Sir,

We refer to the NIT No dated..... for “” (name of the Tender).

“We have carefully read and examined in detail the NIT/Tender Terms and Conditions, including in particular, Clause of the NIT/Tender, regarding submission of an Undertaking, as per the prescribed Format 1 of the NIT/ Tender.

We confirm that M/s.....(the Bidder) has been authorized by us to use our Technical capability for meeting the Technical Criteria as specified in Clause.....of the PQR of the NIT/Tender referred above.

We agree to submit the Security Deposit equivalent to 1% of the total contract value in addition to Security Deposit to be submitted by Bidder as per Clause.....of the NIT/Tender for fulfillment of all obligations in terms of provisions of the contract, in the event of(the Bidder) being selected as the Successful Bidder.

We confirm that we along with M/s.....(the bidder), are jointly or severally responsible for successful performance of the contract.

We confirm that our company shall not participate in the above tender as a ‘Standalone Bidder’ or as a ‘Consortium bidder’ and also shall not authorize any other bidder to use our Technical capability for the above tender.

All the terms used herein but not defined, shall have the meaning as ascribed to the said terms under the referred NIT/Tender.

Signature of Managing Director/Authorized signatory of Parent/ Subsidiary Company

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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> ONE TIME EMD / ONLY FOR THIS TENDER	
5	Validity of Offer	TO BE VALID FOR SIX MONTHS FROM DUE DATE	
		APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER
6	Whether the format for compliance with PRE QUALIFICATION CRITERIA (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format	Applicable	YES / NO
7	Audited profit and Loss Account for the last three years	Applicable/ Not Applicable	YES/NO
8	Copy of GST & PAN Card	Applicable/ Not Applicable	YES/NO
9	Whether all pages of the Tender documents including annexures, appendices etc. are read understood and signed	Applicable/ Not Applicable	YES/NO
10	Integrity Pact	Applicable/ Not Applicable	YES/NO
11	Offer Forwarding Letter / Tender Submission Letter	Applicable/ Not Applicable	YES/NO
12	Declaration by Authorized Signatory	Applicable/ Not Applicable	YES/NO
13	No Deviation Certificate	Applicable/ Not Applicable	YES/NO

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14	Declaration confirming knowledge about Site Conditions	Applicable/ Not Applicable	YES/NO
15	Declaration for relation in BHEL	Applicable/ Not Applicable	YES/NO
16	Non-Disclosure Certificate	Applicable/ Not Applicable	YES/NO
17	Bank Account Details for E-Payment	Applicable/ Not Applicable	YES/NO
18	Capacity Evaluation of Bidder for current Tender	Applicable/ Not Applicable	YES/NO
19	Tie Ups/Consortium Agreement are submitted as per format	Applicable/ Not Applicable	YES/NO
20	Power of Attorney for Submission of Tender/Signing Contract Agreement Power of Attorney of Consortium Partner.	Applicable/ Not Applicable	YES/NO
21	Analysis of Unit rates	Applicable/ Not Applicable	YES/NO
22	Annexure-5: Authorization of representative who will participate in the online Reverse Auction Process	Applicable/ Not Applicable	YES/NO
23	Annexure-6: RA Price Confirmation and Breakup	Applicable/ Not Applicable	YES/NO
24	Annexure-8: Undertaking as per PQR C4 of Annexure-1 i.e. PQR	Applicable/ Not Applicable	YES/NO
25	Annexure-9: Declaration reg. Related Firms & their areas of Activities (x) Other Tender documents as per this NIT.	Applicable/ Not Applicable	YES/NO
26	Annexure-10 Declaration regarding minimum local content	Applicable/ Not Applicable	YES/NO
27	Annexure-11: Declaration regarding compliance to restrictions under rule 144 (xi) of GFR 2017	Applicable/ Not Applicable	YES/NO
28	Annexure-13 Declaration/Undertaking regarding Conflict of Interest among Bidders	Applicable/ Not Applicable	YES/NO

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

DATE :

AUTHORISED SIGNATORY

(With Name, Designation and Company seal)

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ANNEXURE-3

Certificate by Chartered Accountant on letter head

(applicable upto 31st March'2021 in line with MSME notification no. S.O. 2119 (E), dated 26th June'2020)

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)/ Udyam Registration Certificate No.
..... dtd:, Category: (Micro/Small/Medium)).
(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 (i.e. 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:
1 Rs Lacs
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:
2 Rs Lacs
3. ~~For Enterprises~~ (having EM-II Certificate/ valid NSIC Certificate or Udyog Aadhar Memorandum): Investment in plant and machinery or equipment is Rs. Lacs and turnover is Rs. Lacs (as notified in MSME notification no. S.O. 2119 (E) dated 26.06.2020)
4. ~~For Enterprises~~ (having EM-II Certificate/ valid NSIC Certificate or Udyog Aadhar Memorandum): Investment in plant and machinery or equipment is Rs. Lacs and turnover is Rs. Lacs (as notified in MSME notification no. S.O. 2119 (E) dated 26.06.2020)
- 3 (Strike off whichever is not applicable)
- 4
The above investment of Rs Lacs is within permissible limit of
5 Rs Lacs for
..... Micro / Small / Medium (Strike off which is not applicable)
6 Category under MSMED Act 2006.
- 7 Or
- 8 The enterprise has been graduated upward from its original category (micro/small/medium) (strike off which is not applicable), the enterprise shall maintain its prevailing status till expiry of one year from the close of year of registration, as notified vide S.O. No. 2119 (E) dated 26.06.2020 published in the gazette notification dated 26.06.2020 by Ministry of MSME.
- 9 Or
- 10 The enterprise has been reverse-graduated from its original category (micro/small/medium) (strike off which is not applicable), the enterprise will continue in its present category till the closure of the financial year and it will be given the benefit of the changed status only with effect from 1st April of the financial year following the year in which such change took place, as notified vide S.O. No. 2119 (E) dated 26.06.2020 published in the gazette notification dated 26.06.2020 by Ministry of MSME.
- 11 Date:

(Signature)

Name:

Membership Number:

Seal of the Chartered Accountant

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[ANNEXURE-4](#)

Reverse Auction Process Compliance Form

(The bidders are required to print this on their company's letterhead and sign, stamp before RA)

To

- M/s. {Service provider
- Postal address}

Sub: Agreement to the Process related Terms and Conditions

Dear Sir,

This has reference to the Terms & Conditions for the Reverse Auction mentioned in the RFQ document for {Items} against BHEL enquiry/ RFQ no. {BHE/PW/PUR/RGEM1-ESP R&M-BAL-CIVIL/3281} dt. {.....}
This letter is to confirm that:

- 1) The undersigned is authorized official/ representative of the company to participate in RA and to sign the related documents.
- 2) We have studied the Reverse Auction guidelines (as available on www.bhel.com), and the Business rules governing the Reverse Auction as mentioned in your letter and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the auction tool and have understood the functionality of the same thoroughly.
- 4) We also confirm that, in case we become L1 bidder, we will FAX/ email the price confirmation & break up of our quoted price as per Annexure - 6 within **two** working days (of BHEL) after completion of RA event, besides sending the same by registered post/ courier both to M/s. BHEL and M/s. {Service provider.}

We, hereby confirm that we will honor the Bids placed by us during the auction process.

With regards

Signature with company seal

Name:

Company / Organization:

Designation within Company / Organization:

Address of Company / Organization:

Sign this document and FAX/ email it to M/s {Service provider} at {.....} prior to start of the Event.

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ANNEXURE-5

Authorization of representative who will participate in the on line Reverse Auction Process:

1	NAME OF THE BIDDER	
2	NAME & DESIGNATION OF OFFICIAL	
3	POSTAL ADDRESS (COMPLETE)	
4	TELEPHONE NOS. (LAND LINE & MOBILE BOTH)	
5	E-MAIL ADDRESS	
6	NAME OF PLACE/ STATE/ COUNTRY, WHEREFROM S/HE WILL PARTICIPATE IN THE REVERSE AUCTION	

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ANNEXURE-6

**Reverse Auction price confirmation and breakup
(To be submitted by L1 bidder after completion of Reverse Auction)**

To

- M/s. Service provider
- Postal address

CC: M/s BHEL

BHEL-PSWR, 345, KINGSWAY, NAGPUR-440001

Sub: Final price quoted during Reverse Auction and price breakup

Dear Sir,

We confirm that we have quoted.

Rs.{____in value & in words____} for item(s) covered under tender enquiry No. { BHE/PW/PUR/RGEM1-ESP R&M-BAL-CIVIL/3281} dt.{...}

Total price of the items covered under above cited enquiries is inclusive of {*Packing & forwarding, GST, E.D., C.S.T., freight and insurance charges up to {.....} District,{.....} State and Type Test Charges etc., (exclusive of service tax), other as per NIT*}

as our final landed prices as quoted during the Reverse Auction conducted today {date} which will be valid for a period of {____ in nos. & in words ____} days.

The price break-up is as given below.

Total

=====

- Rs. in value & in words

=====

Yours sincerely,

For _____

Name:

Company:

Date:

Seal:

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[ANNEXURE-7](#)

INTEGRITY PACT

NOT APPLICABLE

**BHEL PSWR
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[ANNEXURE-8](#)

UNDERTAKING

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

To,
GM-PURCHASE
BHEL-PSWR, 345, KINGSWAY, NAGPUR-440001

Dear Sir/Madam,

Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS

Ref: NIT/Tender Specification No: BHE/PW/PUR/RGEM1-ESP R&M-BAL-CIVIL/3281

I/We,

___ declare that, I/We am/are not under insolvency resolution process or liquidation or Bankruptcy Code Proceedings (IBC) as on date, by NCLT or any adjudicating authority/authorities, which will render us ineligible for participation in this tender.

**Sign. of the AUTHORISED SIGNATORY
(With Name, Designation and Company seal)**

Place:

Date:

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ANNEXURE-9

DECLARATION

Date: _____

To,
GM-PURCHASE
BHEL-PSWR, 345, KINGSWAY, NAGPUR-440001

Sub: Details of related firms and their area of activities

Dear Sir/ Madam,

Please find below details of firms owned by our family members that are doing business/ registered for same item with BHEL, _____ (NA, if not applicable).

1	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
2	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	

Note: I certify that the above information is true and I agree for penal action from BHEL in case any of the above information furnished is found to be false.

Regards,

(_____)

From: M/s _____
Supplier Code: _____

Address: _____

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Annexure-10

**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED
04TH JUNE, 2020 AND SUBSEQUENT ORDER(S)**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,
GM-PURCHASE
BHEL-PSWR, 345, KINGSWAY, NAGPUR-440001

Dear Sir,

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04th June, 2020 and subsequent order(s).

Ref : 1) NIT/Tender Spec No: BHE/PW/PUR/RGEM1-ESP R&M-BAL-CIVIL/3281

2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... *(specify the name of the organization here)* has a local content of _____ % and this meets the local content requirement for 'Class-I local supplier' / 'Class II local supplier' ** as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |

...

...

...

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

**** - Strike out whichever is not applicable.**

Note:

1. Bidders to note that above format Duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

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ANNEXURE-11

**DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR
2017**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,
GM-PURCHASE
BHEL-PSWR, 345, KINGSWAY, NAGPUR-440001

Dear Sir,

Sub: Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017

Ref : 1) NIT/Tender Spec No: BHE/PW/PUR/RGEM1-ESP R&M-BAL-CIVIL/3281,

2) All other pertinent issues till date

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries. I certify that _____ *(specify the name of the organization here),*

- a. is not from such a country
- b. has been registered with the Competent Authority *(attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Industry and Internal Trade (DPIIT));*

and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. *(attach relevant valid registration, if applicable)*

I hereby certify that we fulfill all requirements in this regard and is eligible to be considered.

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

Note: Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be a ground for immediate termination and for taking further action in accordance with law and as per BHEL guidelines.

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ANNEXURE-12

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:

GM /Purchase BHEL PSWR,
SRIMOHINI COMPLEX, Floor No. 5 & 6, 345 KINGSWAY, NAGPUR 440001, INDIA

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

Sr.Manager Purchase, Email: biraj@bhel.in, Mob: 9587886706

Manager /Purchase, email: vaidya@bhel.in,

GM Purchase, Email: ykarya@bhel.in. Ph: +91 - 712 - 2858 - 633

1. Refer the abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' which is available at www.bhel.com on "supplier registration page" at the following link: https://www.bhel.com/sites/default/files/suspension_guidelines_abridged.pdf
2. ~~"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".~~
3. All Statutory Requirements as applicable for this project shall be complied with.

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4. Conflict of Interest among Bidders/ Agents:

“A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. ***The bidder found to have a conflict of interest shall be disqualified.*** A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:

a) they have controlling partner (s) in common;

or

b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; **or**

c) they have the same legal representative/agent for purposes of this bid; **or**

d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; **or**

e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid; **or**

f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/dealer. There can be only one bid from the following:

1. The principal manufacturer directly or through one Indian agent on his behalf;
and

2. Indian/foreign agent on behalf of only one principal;

or

g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; **or**

h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business.

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Treatment of cases regarding conflict of interest:

The bidder notes that a conflict of interest would said to have occurred in the tender process and execution of the resultant contract, in case of any of the following situations:

- i) If its personnel have a close personal, financial, or business relationship with any personnel of BHEL who are directly or indirectly related to the procurement or execution process of the contract, which can affect the decision of BHEL directly or indirectly;
- ii) The bidder (or his allied firm) provided services for the need assessment/ procurement planning of the Tender process in which it is participating;
- iii) Procurement of goods directly from the manufacturers/ suppliers shall be preferred. 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 the manufacturer/ supplier or the manufacturer/ supplier could bid directly but not both. In case bids are received from both the manufacturer/ supplier and the agent, bid received from the agent shall be ignored. However, this shall not debar more than one Authorised distributor (with/ or without the OEM) from quoting equipment manufactured by an Original Equipment Manufacturer (OEM) in procurements under a Proprietary Article Certificate.
- iv) A bidder participates in more than one bid in this tender process. Participation in any capacity by a Bidder (including the participation of a Bidder as a partner/ JV member or sub-contractor in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of an entity as a sub-contractor in more than one bid if he is not bidding independently in his own name or as a member of a JV.

The Bidder declares that they have read and understood the above aspects, and the bidder confirms that such conflict of interest does not exist and undertakes that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s), in this regard. 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. In case, the Bidder is found having indulged in above activities, the same will be considered as a violation of the tender conditions, and suitable action shall be taken by BHEL as per extant policies/ guidelines

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5. 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."
6. 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".

~~7. 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:~~

- ~~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.~~

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8. Acceptance of Bank Guarantee (BG)

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

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

“Bank Guarantee issued by:

a. Any of the BHEL consortium bank listed below:

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

9. 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:

“BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) (<https://www.bhel.com/guidelines-reverse-auction-2024>) for this tender. RA shall be conducted among the techno-commercially qualified bidders.

Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.”

Note: -

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1. *In case of enquiry through e-procurement the sealed electronic price bid (e-bid) is to be treated as sealed envelope price bid.*
2. *Reverse Auction will be conducted if two or more bidders are techno-commercially qualified.*
3. *Wherever RA is opted in a tender, the techno-commercially qualified H1 will not be allowed to participate in RA. In case more than one H1 bidder quote the same rate, the Price Offer received last, as per the time log of the Portal, shall be removed first, on the principle of last in, first out by the system.*
4. *However, H1 will be allowed to participate in RA in the following cases:*
 - a) *If number of techno-commercially qualified bidders are only 2 or 3.*
 - b) *In case Primary product of only one OEM is left in contention for participation in RA on elimination of H1.*
 - c) *For cases where there are more than 3 techno-commercially qualified bidders, if lowest bidder in sealed price bid is non-MSE and H-1 is eligible MSE and H-1 price is coming within price band of 15% of Non-MSE lowest bidder.*
 - d) *For cases where there are more than 3 techno-commercially qualified bidders, if lowest bidder in sealed price bid is non-MII and H-1 is eligible MII and H-1 price is coming within price band of 20% of Non-MII lowest bidder.*
10. Bidder to strictly follow all the necessary guidelines issued by Customer, District Magistrate, State Government and Central government to control Pandemic/Epidemic outbreak. The related towards quarantine Centre/Medical expenses etc., if any, shall be in the bidder's scope.
11. **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.**

12. OVER RUN COMPENSATION Clause no. 2.12 of Vol I C GCC: Not Applicable

13. **Clause no. 2.24 of GCC PERFORMANCE GUARANTEE FOR WORKMANSHIP:** The guarantee period shall commence from the date of Completion of contractual work as certified by BHEL Site-in charge.
14. **Clause 2.27 LIMITATION ON LIABILITY of General Conditions of contract for services/works has been amended as below:**

“Notwithstanding anything to the contrary in this Contract or LOA or Work Order or any other mutually agreed document between the parties, the maximum liability, for

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damages, of the contractor, its servants or agents, shall under no circumstances exceed an amount equal to the Price of the Contract or the Work Order. Neither party shall be liable to the other for any indirect or consequential loss or damage, including but not limited to loss of use, loss of profits, or loss of contracts, or special, punitive, exemplary losses whatsoever, arising out of or in connection with this contract.

This shall not be applicable on the recoveries made by Customer from BHEL on account of Contractor, any other type of recoveries for workmanship, material, T&P etc. due from the contractor.”

This shall be the part of General Conditions of Contract for this tender.

15. PRICE VARIATION COMPENSATION Clause no. 2.17 of Vol I C GCC is amended as below:

2.17 PRICE VARIATION COMPENSATION

2.17.1 In order to take care of variation in cost of execution of work on either side, due to variation in the index of LABOUR, HIGH SPEED DIESEL OIL, WELDING ROD, CEMENT, STEEL, MATERIALS, Price Variation Formula as described herein shall be applicable

2.17.2 85% component of Contract Value shall be considered for PVC calculations and remaining 15% shall be treated as fixed component. The basis for calculation of price variation in each category, their component, Base Index, shall be as under:

SL NO	CATEGORY	INDEX/ AVERAGE MINIMUM WAGE	PERCENTAGE COMPONENT ('K')				
			CIVIL PACKAGES (See Note A/B/C)			MECHANICAL PACKAGES	Electrical , C&I Material Management/ Handling and other labour oriented packages
			A	B	C		
i)	LABOUR (ALL CATEGORIES)	(a) 'MONTHLY ALL-INDIA AVERAGE CONSUMER PRICE INDEX NUMBERS FOR INDUSTRIAL WORKERS' published by Labour Bureau, Ministry of Labour and Employment, Government of India. (50% weightage out of component 'K') (Website: labourbureau.nic.in)	40	25	30	65	80
		(b) Arithmetical average of minimum wages of Unskilled,					

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		Semi-skilled, Skilled and Highly skilled workers as applicable at project site location (50% weightage out of component 'K')					
ii)	HIGH SPEED DIESEL OIL	Name of Commodity: HIGH SPEED DIESEL (HSD) Commodity Code: 1202010005 (See Note E)	5	3	5	5	5
iii)	WELDING ROD	Name of Commodity: MANUFACTURE OF BASIC METALS Commodity Code: 1314000000 (See Note E)				15	
iv)	CEMENT	Name of Commodity: ORDINARY PORTLAND CEMENT (OPC) Commodity Code: 1313050003 (See Note E)		20	30		
v)	STEEL (Structural and Reinforcement Steel)	Name of Commodity: BARS AND RODS OF MILD STEEL Commodity Code: 1314010014 (See Note E)		25			
vi)	ALL OTHER MATERIALS (Other than Cement & Steel)	Name of Commodity: ALL COMMODITIES Commodity Code: 1000000000 (See Note E)	40	12	20		

Note: A) Cement & Steel: Free Issue (BHEL Scope)

B) Cement & Steel: In Contractor Scope

C) Cement in Contractor Scope, and Steel is Free Issue (BHEL Scope)

D) For Composite packages (i.e. Civil+Mechanical+Electrical and/or C&I or Civil+Mechanical or Mechanical+Electrical and/or C&I), the COMPONENT ('K') for various categories shall be as per respective packages as above.

E) As per the 'MONTHLY WHOLE SALE PRICE INDEX' for the respective Commodity and Type, published by Office of Economic Adviser, Ministry of Commerce and Industry, Government of India. (Website: <https://eaindustry.nic.in>). Revisions in the index or commodity will be re-adjusted accordingly.

2.17.3 #

2.17.4 Payment/recovery due to variation in index shall be determined on the basis of the following notional formula in respect of the identified COMPONENT ('K') viz LABOUR, HIGH SPEED DIESEL OIL, WELDING ROD, CEMENT, STEEL, MATERIALS.

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$$P = K \times R \times \frac{(X_N - X_o)}{X_o}$$

Where,

- P = Amount to be paid/recovered due to variation in the Index for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials
- K = Percentage COMPONENT ('K') applicable for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials
- R = Value of work done for the billing month (Excluding Taxes and Duties if payable extra)
- X_N = Revised Index for "Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials" for the billing month under consideration
- X_o = Index for Labour, Average Minimum Wages for Labour, Index for High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials as on the Base date

2.17.5 PVC shall not be payable for the ORC amount, Supplementary/Additional Items, Extra works. However, PVC will be payable for items executed under quantity variation of BOQ items under originally awarded contract.

2.17.6 Base date shall be calendar month of the 'last date of submission of Tender'.

2.17.7 The contractor shall furnish necessary monthly bulletins in support of the requisite indices from the relevant websites along with his Bills.

2.17.8 The contractor will be required to raise the bills for price variation payments on a monthly basis along with the running bills irrespective of the fact whether any increase/decrease in the index for relevant categories has taken place or not. In case there is delay in publication of bulletins (final figure), the provisional values as published can be considered for payments and arrears shall be paid/recovered on getting the final values.

2.17.9 PVC shall be applicable for the entire original contract period plus the extended period, i.e. for the complete execution period, as follows:

For PVC computation of the nth month:

Let the cumulative delay attributable to the Contractor is D_n in the nth month as per Form-14.

Considering R_n as the billing value for the nth month, PVC for the nth month shall be calculated as follows:

- a) PVC for the portion of R_n for an amount of D_(n-1) shall be payable as per indices for the (n-1)th month.
- b) PVC for the balance portion of R_n shall be payable as per indices for the nth month

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In case $D_{(n-1)}$ is greater than R_n , then entire R_n shall be payable as per indices for the $(n-1)^{th}$ month and the balance portion of $D_{(n-1)}$ shall be adjusted from $R_{(n+1)}$ of the $(n+1)^{th}$ month and will be payable as per indices for the $(n-1)^{th}$ month. The above process shall be continued for subsequent month(s) also till full $D_{(n-1)}$ is consumed.

- i) For milestones mentioned in the contract, PVC shall be applicable as per average of the indices from the month of base date till the month of execution of milestone.
- ii) PVC shall not be applicable for time extension provided for the delays solely attributable to the contractor. No PVC is payable during the period of Provisional Time Extension till grant of final time extension. Applicability of PVC will be decided at the time of grant of final time extension.
- iii) The total amount of PVC shall not exceed 15% of the cumulatively executed contract value. Executed contract value for this purpose is exclusive of PVC, ORC, Supplementary/Additional Items and Extra works except items due to quantity variation.

Note: Work Planning in F-14 format to be meticulously done as per Clause 2.9 of this GCC

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Annexure-13 (Declaration/Undertaking regarding Conflict of Interest among Bidders)
(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

GM/Purchase
BHEL PSWR
Floor No. 5 & 6, Shree Mohini Complex,
345-Kingsway, Nagpur-440001

Dear Sir/Madam,

Sub: Declaration/Undertaking regarding Conflict of Interest among Bidders

E-Tender Specification No: BHE/PW/PUR/RGEM1-ESP R&M-BAL-CIVIL/3281

Job Balance Civil, Structural & Architectural Works of 3x500 MW (Stage-II) NTPC
Ramagundam ESP R&M Project

The Bidder declares that they have read and understood the aspects stated in **SI No. 4 of Annexure-12 above**, and the bidder confirms that such conflict of interest does not exist and undertakes that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder{s), in this regard. 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.

In case, the Bidder is found having indulged in above activities, the same will be considered as a violation of the tender conditions, and suitable action shall be taken by BHEL as per extant policies/ guidelines.

**Signature of the Authorised Signatory
(With Name, Designation and Company seal)**

Place:
Date:

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TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHARAT HEAVY ELECTRICALS LIMITED

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - I: PROJECT INFORMATION

1.0 Project Information:

NTPC Has installed 3x200MW(stage#1) + 3X500MW (stage#2) + 1x500MW (stage#3) STPP at Ramagundam, Telangana. Now ESP R&M work for Stage#2 i.e. 3x500MW is commenced by BHEL. Subject TCC is for Stage#2 i.e. 3x500MW.

Sl. No.	Description	Details
1.1	Location	Ramagundam (18° 45'18"N 79° 27'22"E)
1.2	Nearest Railway Station	Ramagundam (5.8 Kms)
1.3	Nearest Airport	Hyderabad (200 Kms)
1.4	Access By Road	Godawari Khani (06Kms)
1.5	Major Towns/Cities	Karimnagar (61 Kms), Peddapalli (29 Kms)
1.6	Source of Water for Project	Sri Ram Sagar Dam on Godavari River, D-83 Canal from pochampad Reservoir
1.7	Maximum Temperature	47.3 degree Centigrade
1.8	Minimum Temperature	6.8 degree Centigrade
1.9	Humidity (Max/Min)	66% / 44%
1.10	Rainfall (Max/Min)	309.2 mm (Jul) / 5.1 mm (Feb)
1.11	Mean Wind Speed	Km/Hr

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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 work for **Stage # 2 (3x500MW) ESP R&M Balance Civil Package** 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 and 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 balance 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:

1	Unit# 6C - Additional pass Grade slab
2	Pipe rack (F-20) Foundation
3	Compressor house Transformer area
	(a) Grade slab
	(b) Fencing work
	(c) MCC room ramp
	(d) Equipment room approach ramp
	(e) Flush doors (06 No.s)
	(f) peripheral drain and connection to nearest existing drain
	(g) Drain precast cover
	(h) False ceiling
4	Silo utility building
	(a) peripheral drain connection to nearest existing drain and drain precast cover

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	(b) Flush doors (04 No.s)
	(c) False ceiling
5	Control room staircase
	Unit 4,5,6
6	Dry Ash Silo
	(a) Elevator pit and Balance foundations
	(b) Air receiver foundation
7	Conveying air receiver near unit #6
8	Instrument air receiver in unit 4,5,6
9	Blower & Heater foundation in unit 4,5,6
10	Dismantling work of stair case work (unit#6)
11	Existing staircase modification work unit- 4,5
12	Transformer shed storm water down comer connection to existing drain
13	Restoration of False ceiling in control rooms unit- 4,5,6

In addition to above following works are also in scope:

1. Rerouting/Modification work for Ash slurry trenches, cable trenches for Unit 4,5&6.
2. Grade slab and storm drains for Unit 4,5,6 (stage-2)
3. Civil, Structural (erection) and all Architectural finishing work for ash handling works such as Air compressor building, Equipment's foundation for Air compressor building, Transformer foundation with fencing & pipe rack foundation.
4. New/Modification in Service Transformer foundation.
5. Fixing of bolts, base plate's embedment is as stated by drawing & BHEL Engineer in charge.
6. Excavation, backfilling for above said work
7. Erection of Shop Fabricated structures (free issue material)
8. Supply, Fabrication & erection of Structural steel including MS gates as stated by BHEL Engineer in charge.
9. Dismantling of RCC & PCC as stated by BHEL Engineer in charge.
10. Supplying and laying of Earthing strips & mat and providing Earth Pits.
11. Reroute/Modification works in pipelines for Ash handling.
12. 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.

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13. Any temporary activities required to complete the work

2.3 THE WORK WILL INVOLVE:

All civil work required to complete balance Civil, Structural (erection) and architectural works for Stage #2 (3x500MW) **ESP R&M works** 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.

2.4 CIVIL AND ARCHITECTURAL WORKS

The scope covers all Balance Civil and Architectural works within the battery limits of this Package.

The important works covered under this package are as below:

- 2.4.1 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.
- 2.4.2 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.
- 2.4.3 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.
- 2.4.4 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.
- 2.4.5 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.
- 2.4.6 Fabrication and fixing of templates/frames, inserts, fixing of anchor bolts, sleeves, and embedments etc. in concrete.
- 2.4.7 Erection of shop fabricated (free supply from BHEL) structural materials
- 2.4.8 Supply of all instruments and personnel for conducting necessary tests at site as specified/as directed by the Engineer.

2.5

General Scope:

- 2.5.2 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

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documents and additional stipulations as may be provide by the engineer during the course of works.

- 2.5.3 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.
- 2.5.4 Furnishing test reports for the products used or intended to be used, if called for the specifications or if so desired by the engineer.
- 2.5.5 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.
- 2.5.6 Arranging manufacturer's supervision for items of work done as per manufacturer's specifications when so specified.
- 2.5.7 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.
- 2.5.8 Providing all incidental items not shown or specified but reasonably implied or necessary for the successful completion of the work in accordance with contract.
- 2.5.9 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.
- 2.5.10 The drawings enclosed with this tender are intended to give the tenderer a general idea of the type and extent of work involved. The drawings are as such only indicative and not to be considered as the exact construction drawings.

Further this is to be noted that the drawings and the documents furnished along with this specification are the sole property of B.H.E.L. It must not be used directly or indirectly in any way detrimental to the interest of the company.
- 2.5.11 The scope of work will also include such other related works although they may not be specifically mentioned above 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 BHEL engineer.
- 2.5.12 The detail scope of work covered above is not a comprehensive list of items of work involved. The detail scope of work may vary depending on the actual construction requirements as per RFC Drawings.
- 2.5.13 **The successful bidder shall prepare and jointly sign a protocol with BHEL, before commencement of the work, indicating the status of all fresh, left-out, and balance works. Any disputes, claims, or observations arising after afterwards shall not be entertained by BHEL.**

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2.6

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.

Following work is excluded from this scope of work: -

1. Shop Fabrication of steel structures.

2.7

SITE VISIT

Contractor should visit 3X500 MW (Stage#2) NTPC, Ramagundam 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.

NOTE:

Contractor has to make themselves well conversant with the Customer specification (Section C, enclosed separately as VOLIE). In case of ambiguity between BHEL and customer specification, customer specification shall prevail.

2.8 PREAMBLE FOR THE SCHEDULE OF QUANTITIES/BOQ

- 2.8.1 Details of the items in this Schedule shall be read in conjunction with the Corresponding Consultants/NTPC specifications (Section C and Section D), drawings and other documents and shall have precedence over any contrary statement mentioned anywhere in this document.
- 2.8.2 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 during actual construction. Final drawings will be issued progressively during the execution of the work.
- 2.8.3 Items of work provided in this schedule but not covered in the specifications shall be executed strictly as per instructions of the BHEL Engineer.
- 2.8.4 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.
- 2.8.5 The rate quoted shall be inclusive of cleaning the site of any vegetation, dressing and levelling etc., required for commencement of site activities. The

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rates shall also be inclusive of final micro grading before handing over. No separate payment will be made towards the same.

- 2.8.6 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.
- 2.8.7 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/ NTPC before procurement of bought out items/ building materials.
- 2.8.8 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.
- 2.8.9 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.
- 2.8.10 Mix design (M 20, M 25, M 30) 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 Design Mix at site with approval of Engineer In-charge. Engineer In-charge decision shall be final and binding in this regard.
- 2.8.11 **BHEL shall provide the concrete mix designs presently being used at the Ramagundam site(s). The vendor shall verify and satisfy himself about the suitability of these mix designs before using them in the work. No claim or dispute regarding the concrete mix designs provided by BHEL shall be entertained later.**
- 2.8.12 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. Laboratory equipments as per requirement to be arranged by the contractor within quoted rate for conducting day to day quality tests. They may tie up with approved/registered inspection agencies for setting up test lab at site as described above.

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 NTPC.

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

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2.9

Field Quality Assurance:

The contractor shall be responsible for day-to-day quality checks of concrete and other building materials during the progress of work. All quality records and log sheets shall be maintained as per the requirement of BHEL/BHEL'S customer and as per field quality plan approved by BHEL/NTPC. Contractor shall establish their own field quality lab and have tie-up with approved lab by BHEL/NTPC in/outside of the plant if so required by BHEL/NTPC.

2.10 Reconciliation of steel issued by BHEL (free of cost):

2.10.1 General Notes:

- (a) All steel like structural steel, reinforcement bars, earthing rod/ GI flats, foundations bolts, **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 150 MT/ 3000 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 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,

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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.

2.11

HANDLING OF MATERIALS ISSUED BY BHEL:

- 2.11.1 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.
- 2.11.2 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.
- 2.11.3 The contractor shall take delivery of the materials from the designated place within the project premises at his own cost and store the same at his stores as per standard norms. Open land for such purposes shall be provided by BHEL on free of cost basis. Temporary barbed wire fencing of the open storage yard is to be done by the contractor and is included under the scope of his work. Contractor shall also remove grass, bushes, trees etc wherever required off the land provided to him and shall make proper continuous up keeping of the open yard /land by removing grass, bushes trees etc and same is included under the scope of his work & No extra payment shall be made to the contractor in this regard. The bidder shall make complete arrangement of necessary security personnel to safeguard all such materials in his custody. Materials issued will be used only for construction of permanent works. The contractor shall take care of material issued by BHEL and shall protect the same from theft, damage and weathering. Excessive rusting of steel in custody of agency/contractor must be avoided. **In case, due to any cause attributable to the contractor, such rusting of steel occurs rendering the same unusable, then such quantity of steel shall be recovered from the interim payment at the penal rate specified in the tender.**

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2.12

Issue of cement free of cost:

- 2.12.1 Cement is issued through Bulklers/Bag being supplied from manufacturer/stockiest; the same shall be stored in cement silo/stores of batching plant and necessary assistance shall be provided by contractor.
- 2.12.2 Contractor to note that batching plant being established at site shall have minimum **cement Storage shed of 150 MT capacities.**
- 2.12.3 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.
- 2.12.4 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.
- 2.12.5 **In case BHEL supplies cement through Bulker, Bidder has to store cement in Silos of Suitable capacities as decided by Engineer in charge.**
- 2.12.6 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.

2.13

ISSUE OF STEEL.

- 2.13.1 The steel shall be issued to the contractor on the following basis:
- i. Structural Steel: Weighment basis (Unit - MT)
 - ii. Reinforcement Steel and Earthing Rod: Weighment basis (Unit-MT)
 - iii. ~~MS Rails: Weighment Basis (Unit-MT)~~
- 2.13.2 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.

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.

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- 2.13.3 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.
- 2.13.4 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.
- 2.13.5 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.
- 2.13.6 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

- 2.13.7 Bidders shall ensure that no lamination material is taken over by them from BHEL.
- 2.13.8 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.
- 2.13.9 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.

2.14

RETURN OF MATERIALS

- 2.14.1 **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.
- 2.14.2 **Return of Reinforcement Steel and Structural Steel including Scrap:** All surplus steel and all wastage materials will be taken back on weightment basis.

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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.

2.15 Scrap and Serviceable Materials:

- 2.15.1 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.
- 2.15.2 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**.
- 2.15.3 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.
- 2.15.4 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.

2.16 Cement, Steel Consumption and wastage:

2.16.1 **Cement Consumption:**

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

- a. For design mix concrete as per approved design mix.
- b. For nominal mix concrete work, as per minimum cement as specified or as approved by engineer-in-charge.
- c. For item of works, where volume mix is permitted in writing by the BHEL, for masonry works, plaster other miscellaneous items, the cement consumption shall be governed by the "Statement of cement consumption" attached to the 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).

2.16.2 **Cement Wastage:**

- 2.16.2.1 **Allowable wastage:** One and half percent (+1.5%) of theoretical consumption of cement.
- 2.16.2.2 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.

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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

2.16.3 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.

2.16.3.1 Actual consumption = Issue - Surplus.

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

2.16.3.3 Wastage = Actual consumption - Theoretical consumption.

2.16.4 Reinforcement Steel, MS earthing rod, Foundation bolts and ~~MS Rails~~ Wastage

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

Wastage and scrap shall be as per actual weighment basis.		
Sl no.	Reinforcement steel & MS earthing rod	Basis of issue & penal recovery
R-1	Theoretical consumption (without considering wastage and scrap or loss)	Free

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R-2	Wastage limited to plus THREE percent (+3%) of aforesaid theoretical consumption (R-1) towards allowable wastage.	Free
R-3	Wastage beyond THREE percent (+3%) of the theoretical consumption above (R-1).	Penal rate

2.16.5 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.

2.16.5.1 Actual consumption = Issue - Surplus.

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

2.16.5.3 Wastage = Actual consumption - Theoretical consumption.

2.16.6 Structural Steel Wastage

2.16.6.1 **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 weightment basis. Invisible wastage, if any, shall be considered to be included in the specified 4 % allowable wastage.

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

2.17

Reconciliation of Materials:

2.17.1 The contractor shall submit a reconciliation statement of cement and steel issued to the contractor with each RA Bill.

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- 2.17.2 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.
- 2.17.3 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.
- 2.17.4 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.

2.18

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 earthing rod/GI flat	65,000 per MT
P-3	Chequered Plates(if supplied by BHEL) and MS plates	75,000 per MT
P-4	MS Flats, beams, channel, angels etc. (Rolled Sections)	75,000 per MT
P-5	Foundation bolts if supplied by BHEL	90,000 per MT

2.19

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/ NTPC 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/NTPC to ascertain the quality if insisted by BHEL/NTPC. The contractor may tie up with approved/registered inspection agencies for setting up test lab at site as described above. Alternatively, the contractor may tie up with an existing field laboratory for carrying out daily testing requirements, without any additional cost to BHEL.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - II: Scope of Works

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/NTPC 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 BIPIN BIHARI BHEL Site Office Stage #2 (3x500 MW) NTPC ESP R&M, Ramagundam STPS Email: bipin@bhel.in Ph no: +91- 7819870487	Sh Balaji.M PSWR Nagpur Email: balajim@bhel.in Ph no: +91-8600000268
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TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

(Scope Matrix)

Sl. No.	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.1	ESTABLISHMENT			
3.1.1	FOR CONSTRUCTION PURPOSE:			
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	FOR LIVING PURPOSES OF THE BIDDER			
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	ELECTRICITY			
3.2.1	Electricity for construction 415 V (To be specified whether chargeable or free)			
a	Single point source of 415 V	Yes		Free for Construction only. Bidder to make it own arrangement of distribution of electricity at its own cost.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

(Scope Matrix)

Sl. No.	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
	PART I			
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.2.2	Electricity for the office, stores, canteen etc of the bidder (to be specified whether chargeable or free)			
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	Electricity for living accommodation of the bidder's staff, engineers, supervisors etc		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	WATER SUPPLY			
3.3.1	For construction purposes:(to be specified whether chargeable or free)			
a	Making the water available at single point	Yes		Free Please refer clause 3.11
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.2	<u>Water supply for bidder's office, stores, canteen etc</u>			
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	<u>Water supply for Living Purpose</u>			Contractor has to make his own arrangement.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

(Scope Matrix)

Sl. No.	Description PART I	Scope / to be taken care by		Remarks
		BHEL	Bidder	
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	LIGHTING			
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	COMMUNICATION FACILITIES FOR SITE OPERATIONS OF THE BIDDER			
a	Téléphone, fax, internet, intranet, e-mail etc.		Yes	
3.6.0	COMPRESSED AIR wherever required for the work		Yes	
3.7.0	Demobilization of all the above facilities		YES	
3.8.0	TRANSPORTATION			
a	For site personnel of the bidder		Yes	
b	For bidder's equipments and consumables (T&P, Consumables etc)		Yes	

Sl.No.	Description PART II 3.9.0 ERECTION FACILITIES	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.9.1	Engineering works for construction:			NOT APPLICABLE

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

(Scope Matrix)

Sl.No.	Description PART II 3.9.0 ERECTION FACILITIES	Scope / to be taken care by		Remarks
		BHEL	Bidder	
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
i	Periodic visit of the senior official of the bidder to site to review the progress so that works is completed as per schedule. It is suggested this review by the senior official of the bidder should be done once in every two months.		Yes	
j	Preparation of preassembly bay			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 (NTPC). 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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

(Scope Matrix)

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).

2.20

Construction Power (Free for Construction):

4. The contractor shall be provided with free supply of electricity for the purpose of execution of the contract at one point only at work site at 415 V voltage level. The contractor shall make his own further distribution arrangement and shall maintain a minimum drawal power factor of 0.8 and all such devices for maintaining power factor of 0.8 or better shall be under the scope of contractor.
5. The free supply of power will not be provided for the use in the labour and staff colony. Power supply for labour and staff colony shall be provided at one point and Contractor shall be charged at rates prevalent at the site.
6. 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.
7. 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.
8. 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.
9. 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.
10. Contractor shall make necessary arrangements for onward distribution of construction power taking due care of surrounding construction activities like movement of cranes & vehicles, civil work, fabrication/construction/assembly/erection etc. and safety of personnel. It may become necessary to relocate some of the installations to facilitate work by other agencies or by him.
11. 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

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

(Scope Matrix)

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.

12. 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.
13. 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.
14. 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.
15. The charges for the actual energy consumed by contractor for his Labour colony & Staff colony shall be recovered on relevant rate of NTPC and as specified in specification.

GENERAL NOTE: -

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.

16.

Construction Water:

Free supply of service water will be made available for construction and drinking purposes at a single point at work site to be decided by the BHEL

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).

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 (minimum 18 Cum/Hr)	As per Requirement
2	Concrete Pump of suitable capacity	As per Requirement
3	Concrete Transit Mixer	As per requirement
4	Concrete Boom placer	As per Requirement
5	Electrical Winch (of required capacity)	As per Requirement
6	Vibrators (electrical/diesel)	4 Nos.
7	Air Compressor/ Air Blowers	1 Nos
8	Concrete Breaker (HILTI/STANLEY) -	1 Nos
9	Welding Machine	2 Nos
10	Self-priming Dewatering pump of various capacity (Diesel/Electric) From 3HP to 10 HP	2 Nos
11	Curing / dewatering pump - 1.5 / 2 HP	4 Nos
12	Hydraulic Excavator	As per Requirement
13	Hydraulic Excavator / with Rock breaker	As per requirement
14	JCB	01 Nos
15	Tyre Mounted Crane of (40T Capacity)	01 Nos - As per requirement/ Crane to be made available at site in consultation with BHEL Site management
16	Crane (14 T cap)	As per requirement
17	Trailer (20 MT Cap)	As per requirement
18	Tractor mounted Grader/Loader	As per requirement
19	Ply Shuttering board with adequate supporting structure - (Old steel shuttering plates will not be allowed). Steel shuttering (fare face)	Lot (As per requirement)
20	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	As per requirement.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

	Acro Span (Considering Individual Areas)	
21	Dumper	As per Requirement
22	Reinforcement bending machine	1 Nos
23	Reinforcement cutting machine	1 Nos
24	MS scaffolding pipe with matching Couplers	As per requirement
25	Plate Compactor	02 Nos
26	Total Station	01 Nos
27	Auto level & staff	02 Nos
28	Mini Vibro Roller	As per Requirement
29	Vibro roller 10-12MT	As per Requirement
30	Water Tanker	01 No.
31	All Equipment for area Lightning like Halogen bulbs and Portable Light Towers etc for General Area Illumination	As per requirement
32	COMPUTER with printing/photocopying & CD writing facility	2 sets
33	COMMUNICATION Facilities - Landline, WLL, Mobile, FAX, etc.	As per requirement
34	<u>DG Set - 1 nos, Capacity 125 KVA</u>	01 No.s
35	<u>Water sprinkler- 1 no , water sprinkling on daily basis</u>	01 No.s

4.2 Measuring and Monitoring Devices (MMD)

To be finalized at site as per requirement.

~~(a) FIELD QUALITY LAB EQUIPMENTS~~

- ~~1. Automatic compression testing machine (2000KN) – 1no~~
- ~~2. Cube moulds (150mm size) – 36 nos~~
- ~~3. Slump cone with tamping rod – 05 no~~
- ~~4. Sieves of different sizes for fine & coarse aggregate testing – 1 set~~
- ~~5. Core cutter test apparatus – 05sets~~
- ~~6. Oven (capacity 120ltr, range – 250c) – 1no~~
- ~~7. Moisture container(steel/aluminum) – 06nos~~
- ~~8. Rapid moisture meter – 02nos~~
- ~~9. VICAT apparatus with plungers for cement testing – 1set~~
- ~~10. Cube moulds (70mm size) – 06nos~~
- ~~11. Physical balance – 02no.~~
- ~~12. Automatic vibration m/c – 01 no.~~
- ~~13. Jars – 4 nos.~~

~~4.3 Computer Infrastructure: The successful bidder(s) will have to establish computerized project management system along with One number Diploma in Civil Supervisor with~~

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

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 1 nos PCs (multimedia PC work station Core i3/i5, 1 GHZ or above, 500 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 number 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 Computers/printers along with technical (civil diploma) supervisor (one nos) 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 One nos technical supervisor shall remain/work at BHEL offices.
- 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 10,000.00 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:1. 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.

2. All above T&Ps are to be deployed by contractor as and when required as per instruction of BHEL engineer. If works gets delayed due to non-availability of above T&Ps, BHEL reserves the right to deploy the same and recover the charges thereof from the contractor as per prevailing market rate/hiring rate/BHEL internal hiring rates, as the case may be, + Applicable overhead rates.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - V: T&Ps AND MMEs TO BE DEPLOYED BY BHEL ON SHARING BASIS

5.0 List of T&P to be provided by BHEL Free of Hire Charges on sharing basis:

SI No	Description & Capacity of T&P	Capacity	Quantity	Remarks
1	Tyre Mounted Telescopic Boom Crane	Adequate capacity (75 MT or Above)	1 No	All cranes (except Contractor scope) required for mentioned work will be arranged by BHEL as per requirement.

- 5.1 Above T&P will be provided on sharing basis only. Contractor has to plan his activities well in advance and inform BHEL Engineer in charge/ Construction Manager the date of actual use. The decision of BHEL Engineer in-charge/CM on this will be final and binding.
- 5.2 The cranes mentioned at above the table will be provided as per requirement on sharing basis at the discretion of the BHEL Engineer.
- 5.3 Necessary electrical / water / air connection required for operation of any of the BHEL's T & Ps shall be Contractor's account. All the distribution boards, connecting cables, hoses etc., and temporary connection work including electrical connections shall have to be arranged by the contractor at his cost
- 5.4 Contractor shall transport from BHEL stores, install, operate, carry out maintenance, dismantle after use and return to BHEL stores all T&Ps mentioned in 5.1 Table for his use.
- 5.5 The cranes may be BHEL owned or may be obtained on hiring basis including operating and maintenance crew.
- 5.6 Operator and O&M for BHEL owned crane will be provided by BHEL.
- 5.7 Operator and O&M for hired crane will be provided by the hiring agency.
- 5.8 **Contractor shall provide the fuel for BHEL provided cranes (Hired/owned) for his use. Lubricants for crane (hired/owned) shall be provided by the BHEL.**
- 5.9 Contractor shall provide necessary manpower assistance for initial and final assembly & dismantling and for subsequent operations of boom extension and reduction during execution of work. Contractor shall also make necessary arrangements like laying of special sleeper beds and steel plates (**sleepers for BHEL owned/hired cranes shall be provided by the BHEL**) for movement of the crane.
- 5.10 Cranes provided by BHEL will be on sharing basis with other agencies / contractors of BHEL. The allocation of cranes shall be the discretion of BHEL engineer, which shall be binding on the contractor. Cranes will be deployed at appropriate time as decided by BHEL for suitable duration and intended purpose. Augmentation of BHEL T & P under special circumstances shall be discretion of BHEL.

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 conduct 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 period of **(12) Twelve 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) or LOA. 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 Schedule of Completion Period:

The successful bidder shall, after mobilization at the site, prepare a detailed completion schedule in consultation with BHEL to ensure compliance with the project requirements.

~~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.~~

—Schedule for Imp Milestones		
Sl.No.	Civil work of following Activity	Completion from the Date of Start
1	Additional Field Foundations	5 Months
2	ESP Control Room Modifications	6 Months
3	Transformer Foundations	6 Months
4	Silo Utility Building	8 Months
5	Cable Trench/Duct Banks	8 Months
6	Pipe/Cable Rack	10 Months
7	Compressor House Building	12 Months
8	Fly Ash Silo	14 Months
9	Drains & Roads & Other Misc. Works	15 Months

~~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.~~

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - VI: TIME SCHEDULE

Milestones	Civil work of following Activity	Completion from the Date of Start
M1	Additional Field Foundations	05 th Month
M2	Compressor House Building	12 th Month

Note: Refer clause no 5 of Annexure-12: IMPORTANT INFORMATION NIT 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

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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Duties

8.0 TAXES, DUTIES, LEVIES (Rev 14 dated 09/10/2020)

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. E-invoicing under GST has been implemented with effect from 1st October 2020 for all the taxable persons having turnover more than the threshold limit in any preceding financial year from 2017-18 onwards. Therefore, for all the taxable persons falling under the purview of E-invoice, it is mandatory to mention a valid unique Invoice Reference No. (IRN) and QR code as generated from E-Invoicing portal of the Government for the purpose of issuing a valid Tax Invoice. Only an E-invoice issued in the manner prescribed under rule 48(4) of CGST Rules shall be treated as valid invoice for reimbursement of GST amount.
If the successful Bidder is not falling under the purview of E-Invoicing then he has to submit a declaration in that respect along with relevant financial statements.
6. 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
7. 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

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Duties

GST Law. The same will be liable to be recovered from the successful bidder, if such delay is not attributable to BHEL.

8. 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.
9. 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.
10. 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.
11. Way Bill: Successful Bidder to arrange for way bill / e-waybill for any transfer of goods for the execution of the contract.

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.

12. **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.
13. 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,

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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.

14. 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.
15. TDS under GST shall be deducted at prevailing rates on applicable value from the running bills.
16. TCS under Income Tax 1961 has been implemented with effect from 1st October 2020 for every seller having turnover more than threshold limit during financial year immediately preceding financial year in which the sale of goods is carried out, who receives any amount as consideration for sale of any goods of the value or aggregate of such value exceeding threshold limit other than export of goods or who is already covered under other provision of section 206C, collect from the buyer, TCS as per applicable rates of the sale consideration exceeding threshold limit subject to following conditions
 - i. Buyer shall be as per clause (a) of section 206C- (1H)
 - ii. Seller shall be as per clause (b) of section 206C- (1H)
 - iii. No TCS is to be collected, if the seller is liable to collect TCS under other provision of section 206C or the buyer is liable to deduct TDS under any provision of the Act and has deducted such amount.

If Successful Bidder is falling under the purview of TCS then he has to submit a declaration in that respect along with relevant financial statements before the start of work or if bidder is falling under preview of TCS during the work in progress then bidder is compulsorily required to submit relevant financial statement in the beginning of the respective FY.

For TCS claim, vendor has to submit relevant documents required as per Income Tax Act.

17. 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

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7	Maharashtra	27AAACB4146P1ZF
8	Orissa	21AAACB4146P1ZR
9	Telangana	36AAACB4146P1ZG

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

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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 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.

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CHAPTER IX - Technical Specifications and Plot Plan

9.0 Following technical Specifications and Drawings shall be integral part of this tender:

SL. NO	DOCUMENTS	
1.	Section C: Specific Technical Specification	Enclosed separately as VOL I E
2.	Section D: General Technical Specification	

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Chapter-X: General

Tentative Manpower Requirements:

- (a) **Project manager - 01** with adequate experience of minimum 10-15 Years in Industrial Foundation, Building & Structural Works, Power Plant Civil & architectural Works.
- (b) Experienced Civil Engineers: 1 Head
- (c) Experienced Foreman / Supervisors - 2 heads
- (d) Planning & Billing Engineer - 01 heads
- (e) Stores, Gate Pass - 01 heads
- (f) Accounts & Administration- 01 head
- (g) Quality Control Engineer/Chemist - 01 head
- (h) Quality Control Supervisors - 01 heads
- (i) Safety Engineer (officer) - as per HSE manual for Stage#2 (3x500MW) ESP R&M NTPC STPS
- (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

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

10.1 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.

10.2 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.

10.3 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.

10.4 In addition to above, a well experienced qualified engineer to be designated, as 'Project Co-coordinator', 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.

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.

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Chapter-XI Schedule of items Quantities and Factor for deriving Item Rate from the accepted Lump-sum Price

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

<u>CONTENTS</u>	
Description	Remarks
PART A: Instructions to the Bidders	Instructions
PART B: BOQ and % weightage for amount of individual items of Schedule of quantity	BOQ and % weightage for amount of individual items of Schedule of quantity
PART C: Total Lump Sum Price for entire scope of Work	This part is available in the E- Procurement portal entitled as “ Part-C of Vol-II Price Bid ”.

Part A: Instructions to the Bidders

1. The quantity indicated in the BOQ for both the Packages is approximate only and is liable for variation. Payment will be as per actual quantity executed as certified by BHEL Engineer.
2. **Bidders shall quote Total Lump-sum Price for the entire scope of work at the excel sheet provided 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.
3. BHEL has fixed the % weightages as in “Part-B” for the amount of individual items of Schedule of Quantity of Package-A w.r.t. the total price of Price Bid Vol-II for package.
4. Based on the pre-fixed % weightages, amount of individual items shall be derived by BHEL. This amount shall not be rounded off.
5. Based on the quantities of individual item and the amount arrived in Sl. No.-6 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.
6. 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.**

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7. 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 6 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") are given in following table-

ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
100	EARTH WORK			
	Earth work In excavation, backfilling and disposal including necessary men/women, materials, equipment, loading, transportation, unloading, dewatering etc as per specification, drawing and as directed by engineer- in-charge for the following:			
101	Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz. well point method), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead up to 500 m, spreading/levelling of disposed materials etc all complete for following depths below ground level.			
101-a	Depth from ground level but not exceeding 2m	CUM	400.00	0.318820320
101-b	Depth exceeding 2 m but not exceeding 4m	CUM	75.00	0.074933710
101-c	Depth exceeding 4m but not exceeding 6m	CUM	5.00	0.006244410
103	Earth work in excavation in soft rock (rock without any recovery of excavated materials in the form of hard stone/boulder) including weathered rock which can be excavated by means of crow bar, pick axe, pneumatic rock breaker attachment with excavator machine etc but does not require chiselling or blasting including setting out, levelling, dewatering (wherever required), shoring & strutting (wherever required), dressing the sides &			

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
	bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead up to 500 m, spreading / levelling of disposed materials etc all complete for following depths below ground level.			
103-a	Depth from ground level but not exceeding 2 m	CUM	65.00	0.076837100
103-b	Depth exceeding 2 m but not exceeding 4 m	CUM	35.00	0.049645340
103-c	Depth exceeding 4 m but not exceeding 6 m	CUM	5.00	0.008510600
A107	Backfilling up to any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 300 mm compacted thickness (higher thickness of layers up to 500mm with heavy mechanical compacting equipment) using/with selected materials from compulsorily excavated soil available within a lead up to 500m and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete. For the following.			-
107-a	Each layer compacted so as to achieve at least 90% standard proctor density at OMC as per IS 2720 (Part-VII)	CUM	350.00	0.288534760
A108	Earthwork in Back filling up to any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 300 mm thickness using/with selected materials earth directly from excavation within a lead up to 1Km and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete. For the following:			-
a	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	100.00	0.070072570
109	Extra over ST No. 101 and 103 to 107 for carriage of excavated earth/selected materials for every 1 km or part thereof beyond an initial lead of 500m.	CUM	20998.56	2.205869690
A109	Extra over ST No. 101 and 103 to A108 for carriage of material/earth for every 500m or	CUM		-

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
	part thereof beyond an initial lead of 1km.			
b	Carriage for disposal of serviceable/unserviceable material/ earth	CUM	10.00	0.001050480
111	Supplying and filling sand up to any depth under floors, around foundations, plinths etc. in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.	CUM	19.00	0.329414220
200	CONCRETE WORKS			-
	Providing and placing concrete work including cost of labour, materials (unless otherwise specified in BOQ/contract specification) and equipment for handling, transportation, batching, mixing, placing, vibrating and curing (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following:			-
	Note: Fly ash based Portland pozzolana cement conforming to IS: 1489(Part -1) shall be used (unless required otherwise to counteract the soil water chemical environment); coarse aggregate- Coarse aggregate for concrete shall be chemically inert, hard, strong, durable against weathering of limited porosity and free from deleterious materials. It shall be properly graded and shall meet the requirement of IS:383; Fine aggregate - Sand shall be hard, durable, clean and free from adherent coatings of organic matter and clay balls or pellets. Sand when used as fine aggregates in concrete shall conform to IS:383, all complete as per customer & contract specification and drawing.			-
201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as filling course at any depth below finished floor level, under and around foundations/floors, mass fill etc.	CUM	45.36	1.752286690

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
202	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/ floors at any depth below finished floor level etc.	CUM	14.00	0.540829220
A204	Concrete of grade M20 (1 part cement, 1.5 part sand, 3 parts of 12 mm graded aggregate by volume) under floors, paving, plinth protection, pipe encasing etc complete.	CUM	33.00	1.274811750
205	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262- 2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc at any level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			-
205-a	M25 Grade	CUM	217.00	8.663805200
206	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262- 2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at any level above finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			-
206-a	M25 Grade	CUM	74.00	3.033020380
213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in precast works like roof slabs/trench covers, fins, lintels, chajas, beams, columns, fence posts, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transporting, all leads, erection without damage, setting in position with cement sand mortar			-

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
	(1:3), filling the gaps between adjacent precast units with M30 grade concrete or cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc. Complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades.			
213-a	M 25 grade	CUM	3.00	0.166972460
213-b	M 30 grade	CUM	4.00	0.263339150
215	Dismantling concrete work for all types of structures at all levels including stacking of serviceable material to a lead of 500 m and disposal of unserviceable material up to a lead of 2 km, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.			-
215-a	Plain cement concrete of all grades	CUM	1.00	0.010010970
215-b	Reinforced cement concrete of all grades	CUM	165.00	2.538292970
216	Chipping of concrete in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials up to a lead of 2 km or as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement .	CUDM	10.00	0.006886820
217	Extra over and above St No 216 for cutting of reinforcement, all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.	SQCM	5.00	0.000297840
218	Cutting Reinforced concrete with mechanised tools like Core drilling machine etc. for cutting pockets, holes, cores in slab, beam, column or foundation as per direction of engineer in charge.	CUDM	1463.00	2.296054100

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
A222	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in substructure including foundation and pedestal, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following, straightening of existing reinforcement, if required. The cost of new reinforcement and dismantling of concrete will be paid separately.			-
A	Roughening / chipping of existing concrete face, supply, applying NITO BOND Fosroc or equivalent on existing concrete surface.(Roughing/chipping to be paid separately)	sqm	7.70	0.233441010
300	FORM WORK			-
	Providing, fixing and removing formwork at all elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering etc. complete as per drawing, specifications and as per direction of engineer in charge for the following:			-
301	Fair face form work with good quality water proof plywood of required thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	SQM	424.00	2.353718210
302	Fair face form work with good quality water proof plywood of required thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights, all complete as per specification, drawing and instruction of engineer in charge.	SQM	864.00	5.764379930
304	Providing, fixing and removing formwork in block-outs/pockets and openings (below 0.1 sqm plan area) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and			-

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
	instruction of engineer in charge.			
304-a	Pockets up to 150mm depth	Each	1.00	0.001998560
304-b	Pockets of depths more than 150 mm and up to 300 mm depth	Each	123.00	0.403531480
304-c	Pockets of depths more than 300 mm and up to 600 mm depth	Each	40.00	0.230461190
304-d	Pockets of depths more than 600 mm and up to 1000 mm depth	Each	1.00	0.008942640
400	REINFORCEMENT			-
	Reinforcement work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-
402	Taking Delivery from BHEL stores/store yard, transportation, delivery at site, straightening, cutting, bending, placing in position at any level, binding/welding in position of steel reinforcements of TMT steel of grade Fe-500 with minimum 14.5% elongation confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer.	MT	47.20	4.509470980
500	WATERPROOFING			-
A 501	Providing roof water treatment as following, including all material, labour, equipment, transportation, handling etc. all complete. i) providing and laying polymerised mastic over the rcc roof as a primary coat. ii) Application of high solid content liquid applied urethane based elastomeric water proofing membrane, over the prime coat, to give uniform joint less dry film iii) For efficient disposal of rain water, the run off gradient for the roof shall be not less than 1:100. This gradient shall be provided by screed concrete M-15 (using 12.5 mm coarse aggregates) and/ or cement mortar (1:4) over the elastomeric water proofing membrane with 25mm thick cement mortar(1:4) topping. Roof drain level shall be provided with 45cmX45cmX30mm thick khurras with 1:2:4 PCC	SQM	405.80	3.337483670

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
	over PVC sheet of 1m x1m x 400 micron (thick)& finished with 12mm thick 1:3 cement sand plaster. iv) Wearing course at top shall consist of 25mm thick PCC (M15) cast in panels reinforced with 0.56 mm diameter galvanised chicken wire mesh & sealing of joints using sealing compound / elastomeric water proofing membrane.(cost of khurras shall be paid separately). All complete as per customer and Contract specification and drawing.			
502	Providing and making 45x45 cm Khurras with minimum 30mm of 1:2:4 PCC over PVC sheet of 1m x 1m x 400 micron thk. & finished with 12mm thick 1:3 cement sand plaster etc. all complete as per approved drawings, directions on engineer in charge and customer specifications.	Each	11.00	0.073252390
503	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 stone aggregate 10mm and down gauge) including finishing with cement mortar 1:3(1 cement: 3 fine sand) as per standard design in 75x75 mm deep chase	RM	206.36	0.257877770
600	JOINTS AND FILLERS			-
	Joints & fillers including all labour, material, equipment, transportation, handling etc at any level as per specification, drawings and as directed by engineer - in - charge.			-
601	Supplying & installation of bitumen impregnated fibre board conforming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumen etc. all complete.			-
c	25 mm wide joints	SQM	50.00	0.446323080
d	50mm wide joints	SQM	10.00	0.185885420
602	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves:			-
602-b	20mm X 25mm	RM	5.00	0.017115920
606	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete			-

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
	for the following:			
606-b	230 mm wide and 8 mm thick	RM	22.44	0.089700640
700	MS EMBEDMENTS			-
	Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.			-
701	Supply, fabricating and fixing of mild steel embedments, bolts, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including welding, bolting, cutting, drilling, scaffolding, setting etc. all complete.	MT	0.50	0.440459420
701a	same as above with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.	MT	6.00	1.292927420
704	Taking Delivery from BHEL stores, transportation, unloading at site, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, locknuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffener plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete.	MT	0.30	0.067791690
705	Supplying, fabricating, erecting and installing following items in concrete/brick wall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.			-
705-a	MS pipes of all diameters	Quintal	0.30	0.026988660
705-c	UPVC pipes / conduits of all diameters	Quintal	0.30	0.114666740
705-d	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for brickwork with expansion sleeve of A6 polyamide:			-
705-d-ii	10mm Dia	Each	10.00	0.005198550
705-d-iii	12mm Dia	Each	77.00	0.049565610

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
iv	16mm Dia	Each	10.00	0.008582790
900	DOORS, WINDOWS, VENTILATORS, LOUVERS			-
	Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material, equipments, transportation, handling, preparation of working drawings etc. at any level as per specification, drawings and as directed by engineer - in - charge.			-
903	Providing, fitting and fixing solid core flush door shutter as per IS 2202 part II. 35 mm thick homogeneous particle board bonded with BWP type phenolformaldehyde synthetic resin, particle board core confirming to IS 3087 type I, 35x12 mm thick teakwood beading all around including preparation of working drawings godrej or equivalent make mortice lock with handles on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125 mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium colour dyed), finish synthetic paint over primer, screws etc. all complete as per drawing, specification and instruction of engineer in charge, with commercial faces and teak wood edges. All complete as per customer and contract specifications and drawings.	SQM	55.18	3.374833220
A904	Providing and fixing steel doors, those shall consist of double plate flush door shutters. The door shutter shall be 45 mm thick with two outer sheets of 18 G rigidly connected with continuous vertical 20 G stiffeners at the rate of 150 mm centre to centre. Side, top and bottom edges of shutters shall be reinforced by continuous pressed steel channel with minimum 18 G. The door shall be sound deadened by filling the inside void with mineral wool. The door shall be sound deadened by filling the inside void with mineral wool. Doors shall be complete with all hardware and fixtures like tower bolts, stoppers, aldrops, of Godrej or equivalent make.	SQM	7.56	0.875602150

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
906	Providing and fixing anodized extruded aluminium doors and window (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 3mm wall thickness as per IS:1285, IS:733 and anodized and electro colour coating of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners,SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. Glazing shall be clear float glass of 6mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately). All complete as per customer specification and drawing.	KG	676.50	3.968301400
907	Providing and fixing fire proof steel doors(single or double shutter) with panic devices shall be 45mm thk flush design comprising of two outer sheet of 1.6mm galvanized steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres including all fittings, shop painting with approved post office/ signal red colour fire resistant paint and mineral wool insulation(64 kg/cum density) complete and shall be fire proof as per IS:3614, TAC requirements and all complete as per specifications.	SQM	2.52	0.502514720
909	Providing and fixing anodised aluminium work of Jindal, Hindalco or other equivalent approved make for door frames, windows, ventilators, partitions, railing etc with extruded standard tubular and other sections including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro colour dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion	Kg	330.00	2.274432820

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
	fasteners, SS screws or with fixing clips, including necessary filling of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-metallic protection etc. including preparation of working drawings, aluminium cleat angle, aluminium Snap-On-beading for glazing/panelling, stair case tread nosing, with all fittings and fixtures (like tower bolts, handles, door stopper with rubber shoes, 'L' drops, stays, floor springs, hydraulic door closures etc.), CP brass/stainless steel screws, providing and fixing hinges/pivots, and making provision for fixing of fitting wherever required including cost of PVC/neoprene gasket, all complete as per drawing, specification and instructions of engineer in charge (Glazing and panelling shall be paid separately).Weight of aluminium section only shall be measured.			
911	Providing and fixing of door closers as per IS 3564, of approved make & quality all complete of following type :			-
911-a	Over head hydraulic door closures	Each	1.00	0.017408230
912	Providing and fixing pressed steel frames fabricated from 16 gauge M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustable floor anchors, floor tiles/weather bars ,paintings etc all complete as per specifications.	Kg	299.38	0.466896440
913	Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely riveted with stiffening angles.(partly coiled and lath/full lath), all complete as per specifications.			-

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
913-c	Electrically Operated	SQM	107.80	5.185977850
A915	Providing, fixing and fitting of glazing of first grade class in steel/aluminium/wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete. Below mentioned glass thickness are bare minimum only and actual thickness will depend on the panel size of the glazing to be provided. Glazing shall have uniform refractive index. All complete as per customer & contract specification and drawing. (Note- Payment shall be made on measured clear area after gasket/ sealant only)			-
915-c	6.0 mm thick toughened glass plain/ tinted	SQM	43.36	0.810066980
923	Supply and placing in position suitable grill for all windows and ventilators on ground floor of all buildings as per drawing.			-
923-a	Steel	kgs		-
923-b	Aluminium	kgs	10.00	0.082706640
1000	BRICK WORK			-
	Brickwork masonry including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge for the following:			-
1001	Providing brick work in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc. in thickness varying from 230mm to 460mm at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.			-
1001 a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm ²	CUM	41.80	2.279458590
1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			-
1002 a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm ²	CUM	143.74	9.893733460

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
1003	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls, chambers etc. in thickness 115mm at all heights, places and position above or below plinth/graded level including providing two nos. 6 mm diameter MS bars at every third layer, raking out joints, curing, scaffolding etc complete excluding plastering and painting as per specification.			-
1003 a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	SQM	93.26	0.787024400
A1006	Breaking of existing brick work at all levels including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	CUM	11.28	0.215326980
1009	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar etc. complete.	CUM	2.00	0.041360710
1010	Filling existing brick wall/ partition wall opening at all level including making good the broken edges/surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/supporting at any level, removal of debris up to a lead of 1 km including loading, unloading, transportation etc. all complete.	SQM	5.00	0.048008990
1100	DAMP PROOF COURSE			-
	DAMP PROOF COURSE: Damp proof course including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, shuttering, centering, curing etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-
A1101	Providing Damp Proof Course of following thickness with M20 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound followed by two layers of bitumen coating 85/ 25 grade as per IS: 702 @ 1.7 kgl sq .m. etc. all complete.			-
b	50mm thick	SQM	116.60	0.415049240
1200	CEMENT MORTAR PLASTER			-

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
	Cement mortar plaster including making grooves wherever required including all labour, material (unless otherwise specified in BOQ/contract specification), scaffolding, curing etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-
1201	Providing 18mm thick plaster in two layers outside the building/boundary wall in cement mortar 1:6 on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete. (Cement will be supplied by BHEL)	SQM	830.00	2.900115380
1202	Providing 12mm thick plaster inside the building/boundary wall in cement mortar 1:6 on walls finished to a smooth finish as per specification all complete.	SQM	1299.00	3.804201820
1204	Providing 6mm thick plaster on ceiling in cement mortar 1:4 finished to a smooth all complete.	SQM	324.00	0.714462940
1300	FINISHES TO CONCRETE / PLASTERED SURFACES			-
	Finishes, painting to concrete, plastered surfaces including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, surface preparation, scaffolding etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-
1304	Two or more coats of acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete.	SQM	1661.00	1.646827530
1305	Providing and applying two or more coats of acrylic emulsion paint as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	10.00	0.013248350
A1317	Providing and applying 2 mm thick polymer based water resistant putty on walls in Air conditioned Area including preparation of surface, staging, etc to achieve a smooth even surface all complete as per specification and as directed by engineer.	SQM	10.00	0.011083840

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
A1319	Providing and applying two or more coats of Premium Acrylic Smooth Exterior paint with silicone additives of approved brand and manufacture and required shade over one coat of primer of waterproof cement paint after necessary cleaning/ washing, preparing the surface using coir brush/ wire brush, sand paper, including filling of cracks with putty wherever required etc. all complete to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guidelines. The final finished coating shall be fungus resistant, UV resistant, water repellent and extremely durable with color fastness as per specification.	SQM	1293.60	1.788555920
1400	FLOORING AND SKIRTING			-
	Flooring and skirting at all level including base layer, labour, material (unless otherwise specified in BOQ/contract specification), equipments, transportation, handling, curing, polishing etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-
1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron particles in flooring. Under layer of 38mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5mm well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardener mix with approved quality metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	98.30	0.535190160
1600	FALSE CEILING			-
	False ceiling including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, suspension system etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
A1604	Providing, fixing and laying permanently colour coated false ceiling of 15 mm thick mineral fibre board, in tile form of size 600mmx 600mm, along with galvanised light gauge rolled form supporting system in double web construction pre painted with steel capping, of approved shade and colour, to give grid of maximum size of 1200x600, as per manufactures details including supporting grid system, expansion fasteners for suspension arrangement from RCC, providing openings for AC ducts, return air grills, light fixtures etc all complete including 50mm thick mineral wool insulation mat (as per IS:8183)having a density of 32kg/cum for glass wool or 48 kg/cum for rock wool, backed with 0.05 mm thick aluminium foil & 24 G x 25 mm mesh wire netting and shall be fixed to ceiling with 24 G wire ties and suitable fixing arrangements. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures etc. Suitable M.S. channel (minimum MC 75) grid 1200 mm C/C maximum shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. The work to be complete as per specifications, drawings and direction of engineer. (Structural steel works for platform for movement is separately payable under relevant items of BOQ)	SQM	72.96	3.169940990
1700	RAIN WATER DOWN TAKE PIPES			-
	Rain water down take pipes at all level including all labour, material (unless otherwise specified in BOQ/contract specification), transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc as per specification, drawings and as directed by engineer - in - charge for the following:			-
1707	Providing and fixing GI down take pipes conforming to IS:1239 /IS:3589 of medium duty all complete for following diameters.			-
1707 b	150 mm Dia	RM	50.09	0.899057570
1800	MISCELLANEOUS WORKS			-

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
	Miscellaneous works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge for the following:			-
A1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 275 mm compacted thickness including breaking of stone boulders to required sizes, filling the interstices with well graded selected sand and compacting to 90 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	64.03	1.614711160
1802	Supply and laying approved quality Stone aggregate 40mm size in transformer yards.	CUM	1.00	0.031731920
1808	Laying of earthing mats/rods including risers, transportation from yard stores, loading, unloading, cutting to length, welding, protective painting of joints etc. all complete. (Excavation & Back filling shall be paid separately under respective item of earth work excluding Earthing mats/rods.	MT	1.00	0.128619890
1810	Construction of below ground earthing system test links as per drawing/ sketches including concreting, reinforcement, formwork, providing & fixing GI strip etc as per drawing & specification (excavation & backfilling only will be paid under applicable BOQ items.	EACH	7.00	0.549677430
2000	FENCING AND GATES			-
	FENCING AND GATES: Fencing and gates including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
2001	Supplying and erecting in position 2.4 m high PVC coated galvanised chain linked fencing of minimum 8 gauge (including PVC coating) of mesh size 75mm x 75mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. GI barbed wire fencing of height of 600 mm conforming to IS 298 at top of chain link fencing shall be provided with 4 strands of barbed wire hot dip galvanised wire of 12G comprising of 2 ply of wires with barbs of 16G spaced at 100mm. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25X6 mm GI flat stretcher bar at end posts, accessories etc. all complete. (Structural post shall be paid separately under item 213a)	RM	16.50	0.398169570
2010	Supply, fabrication and installing in position and testing MS Gates out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffeners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete.	MT	3.00	2.422045520
2200	SANITARY WORKS			-
2208	Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following.			-
a	200mm dia	RM	30.00	0.318217940
b	300mm dia	RM	10.00	0.170677610
c	450mm dia	RM	10.00	0.217452540
d	600mm dia	RM	5.00	0.133803880
2209	Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following.			-
a	150mm dia	RM	30.00	0.245442360
b	250mm dia	RM	5.00	0.052561470
2300	STRUCTURAL STEEL			-

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	Weightage (%)
	Structural steel works including all labour, material (unless otherwise specified in BOQ/contract specification), equipments unless otherwise specified, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-
2307	Supplying, fabrication, erection and alignment of factory-made electroformed galvanised grating units with mild steel (having minimum galvanisation of 610 g/sqm) conforming to IS:2062 in flooring, platforms, drain and trench covers, walk- ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT		-
a	60% Against the supply	MT	2.00	1.222201450
b	40% Against the Erection	MT	2.00	0.814800970
A2322	Supply, fabrication and fixing of galvanised MS pipe hand railing (1000 mm high) of 32mm (Medium Class) including transportation, loading/unloading, painting etc. all complete along with kick plates 100mm high and 6mm thick.	MT		-
a	60% Against the supply	MT	1.00	0.637316670
b	40% Against the Erection	MT	1.00	0.424877780
	Total Weightage			100