

E-TENDER SPECIFICATION

No. BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Scope of Work: Balance Civil and architectural works of main plant FGD Civil works of Unit#4 (1X500MW), Unit#5 (1X500MW) & Unit#6 (1X500MW) including Civil works of Fire Protection System, Misc. Tanks, Misc. Pump House & Sump, Pipe/Cable Rack, Duct Supports, Road, Drains, Water Supply, Sanitation etc. at NTPC Ramagundam TPS Stage-I & II (3X200MW + 3X500MW) FGD Package.

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-3268</u>)
NIL	Notice Inviting Tender	(Part of <u>Vol-IA-3268</u>)
I-A	Technical Conditions of Contract	Vol-I-A-3268
I-B	Special Conditions of Contract	Vol-I-BCD-3268
I-C	General Conditions of Contract	(Part of Vol-I-BCD-3268)
I-D	Forms & Procedures	(Part of Vol-I-BCD-3268)
II	Price Bid Specification as specified in E-Procurement Portal	Volume-II-Price Bid-3268

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

E-TENDER SPECIFICATION

No. BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Scope of Work: Balance Civil and architectural works of main plant FGD Civil works of Unit#4 (1X500MW), Unit#5 (1X500MW) & Unit#6 (1X500MW) including Civil works of Fire Protection System, Misc. Tanks, Misc. Pump House & Sump, Pipe/Cable Rack, Duct Supports, Road, Drains, Water Supply, Sanitation etc. at NTPC Ramagundam TPS Stage-I & II (3X200MW + 3X500MW) FGD Package

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:

3268

NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 5 of 147

Date: 14-07-2026

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/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268	
ii	Broad Scope of job	Balance Civil and architectural works of main plant FGD Civil works of Unit#4 (1X500MW), Unit#5 (1X500MW) & Unit#6 (1X500MW) including Civil works of Fire Protection System, Misc. Tanks, Misc. Pump House & Sump, Pipe/Cable Rack, Duct Supports, Road, Drains, Water Supply, Sanitation etc. at NTPC Ramagundam TPS Stage-I & II (3X200MW + 3X500MW) FGD Package	
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: 14/07/2026, Time :12:00 Hrs Closes: 24/07/2026, 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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 6 of 147

S No.	ISSUE	DESCRIPTION	
v	DUE DATE & TIME OF OFFER SUBMISSION	Date: 24/07/2026, Time :13:00 Hrs The bidder should submit their offer online only in e-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.	Applicable
vi	OPENING OF TENDER (Techno-Commercial Bid)	Date: 24/07/2026, 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. 20,00,000/- (Rupees Twenty 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	Applicable

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Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 7 of 147

S No.	ISSUE	DESCRIPTION	
		Email : vvaidya@bhel.in 3) Mr. VK Arya Designation: GM 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)	---	Not Applicable
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.)	Applicable
xii	Latest updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage (www.bhel.com --> Tender Notifications -> View Corrigendum), & 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

Registered Office: BHEL House, Siri Fort, New Delhi - 110 049, India
Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 8 of 147

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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.

(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://eprocurebhel.co.in>). The bidder should respond by submitting their offer online only in our e-Procurement platform at (<https://eprocurebhel.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.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 9 of 147

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 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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 10 of 147

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
	Part-I A	
	ENVELOPE - I superscribed as: PART-I (TECHNO COMMERCIAL BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION: CONTAINING THE FOLLOWING:-	
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. Note: 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	
	ENVELOPE - II superscribed as: PART-I (EMD) TENDER NO : NAME OF WORK : PROJECT:	

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 11 of 147

	DUE DATE OF SUBMISSION:	
	CONTAINING THE FOLLOWING:-	
	Earnest Money Deposit (EMD) in the form as indicated in this Tender	

	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 (Duty 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

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 12 of 147

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 -
(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. $P_T = P_1 + P_2 + P_3 + P_4 + \dots + P_N$)

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 13 of 147

- b) Number of Months 'T₁' for which 'Monthly Performance Evaluation' as per relevant formats, should have been done in the 'Period of Assessment' for the corresponding similar package P₁. Similarly T₂ for package P₂, T₃ for 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

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

- e) Bidders to note that the risk of non-evaluation or non-availability of the 'Monthly Performance Evaluation' reports as per relevant formats is to be borne by the Bidder.
- f) Table showing methodology for calculating 'a', 'b' and 'c' above

Sl. No.	Item Description	Details for all Regions							Total
(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

Page 14 of 147

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 15 of 147

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'R_{BHEL}' shall be calculated subject to availability of 'performance scores' for at least 6 'package months' in the order of precedence below:

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

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} '≥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.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 16 of 147

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 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	i). Electrical	i). Boiler & Aux (All types)

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Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 17 of 147

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

- 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.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 18 of 147

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 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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 19 of 147

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change/discrepancy same shall be informed immediately. Login Details for viewing scores in Contractor Performance Evaluation System shall be provided to the Contractor by SCT Department.

- vii). Performance Evaluation for Activity Month shall be completed in Evaluation Month (i.e. month next to Activity Month) or in rare cases in Post Evaluation Month (i.e. month next to Evaluation Month) after approval from Competent Authority. In case scores are not acceptable, Contractor can submit Review Request to GM Site/ GM Project latest by 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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 20 of 147

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 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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 21 of 147

.....
applicable), past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD.

17.0 In case BHEL decides on a 'Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorized representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders.

18.0 Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise.

19.0 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.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 22 of 147

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- 23.5 In order to be qualified for the tender, Prime Bidder and Consortium partner or partners shall satisfy (i) the Technical 'Pre Qualifying Requirements' specified for the respective package, (ii) "Assessment of Capacity of Bidder" as specified in clause 9.0.
- 23.6 Prime Bidder shall comply with additional 'Technical' criteria of PQR as defined in 'Explanatory Notes for the PQR'.
- 23.7 Prime Bidder shall comply with all other Pre Qualifying criteria for the Tender unless otherwise specified
- 23.8 In case customer approval is required, then Prime Bidder and Consortium Partner or partners shall have to be individually approved by Customer for being considered for the tender.
- 23.9 Prime Bidder shall be responsible for the overall execution of the contract.
- 23.10 In case of award of job, Performance shall be evaluated for Prime Bidder and Consortium Partner or partners for their respective scope of work(s) as per prescribed formats.
- 23.11 In case the Consortium partner or partners back out, their SDs shall be encashed by BHEL 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).

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 23 of 147

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.

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.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 24 of 147

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			
Small			

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: -

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 25 of 147

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- 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
 - 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.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 26 of 147

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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.

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)

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 27 of 147

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

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 28 of 147

ANNEXURE-1

PRE QUALIFYING CRITERIA

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268			
JOB	Balance Civil and architectural works of main plant FGD Civil works of Unit#4 (1X500MW), Unit#5 (1X500MW) & Unit#6 (1X500MW) including Civil works of Fire Protection System, Misc. Tanks, Misc. Pump House & Sump, Pipe/Cable Rack, Duct Supports, Road, Drains, Water Supply, Sanitation etc. at NTPC Ramagundam TPS Stage-I & II (3X200MW + 3X500MW) FGD Package		
S No	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Applicability	
A	Submission of Integrity Pact duly signed (if applicable) (Note: To be submitted by Prime Bidder & Consortium /Technical Tie up partner jointly in case Consortium bidding is permitted, otherwise by the sole bidder)	Applicable	
B	Technical PQR 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 B.2.2) & 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. 840 Lakhs against single work order. OR B.1.2) Executed Two works each of value not less than Rs. 525 Lakhs against maximum two work orders. OR B.1.3) Executed Three works each of value not less than Rs. 420 Lakhs against maximum three work orders. AND B.2.1: Bidder should have executed Reinforced Cement Concrete (RCC) quantities of at least 2828 Cum in cumulative of maximum two running/completed contracts within a common period of “twelve consecutive months”. OR	Applicable	

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 29 of 147

	B.2.2: Bidder should have executed Reinforced Cement Concrete (RCC) quantities of at least 1886 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 ₹ 315 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”	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	
<u>Explanatory Notes for the PQR (unless otherwise specified in the PQR):</u>			

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 30 of 147

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 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.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 31 of 147

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).
 - 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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 32 of 147

- 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 withdrawn and executed on risk and cost basis of the prime bidder.
 - l. In case Prime Bidder withdraws or insolvency / liquidation / winding up proceedings

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 33 of 147

.....
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.

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 34 of 147

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)

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 35 of 147

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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 36 of 147

[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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 37 of 147

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)

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 38 of 147

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

Registered Office: BHEL House, Siri Fort, New Delhi - 110 049, India
Website: www.bhel.com

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 39 of 147

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/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268} 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.

Registered Office: BHEL House, Siri Fort, New Delhi - 110 049, India
Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 40 of 147

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	

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 41 of 147

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/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268} 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:

Registered Office: BHEL House, Siri Fort, New Delhi - 110 049, India
Website: www.bhel.com

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Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 42 of 147

[ANNEXURE-7](#)

INTEGRITY PACT

Between

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

and

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

Preamble

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

"E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268 for Job: Balance Civil and architectural works of main plant FGD Civil works of Unit#4 (1X500MW), Unit#5 (1X500MW) & Unit#6 (1X500MW) including Civil works of Fire Protection System, Misc. Tanks, Misc. Pump House & Sump, Pipe/Cable Rack, Duct Supports, Road, Drains, Water Supply, Sanitation etc. at NTPC Ramagundam TPS Stage-I & II (3X200MW + 3X500MW) FGD Package" (hereinafter referred to as "Contract"). The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

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

Section 1- Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.

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Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 43 of 147

- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

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

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

Section 3 - Disqualification from tender process and exclusion from future contracts

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 44 of 147

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

Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder (s) from the tender process before award / order acceptance according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal is entitled to terminate the Contract according to Section 3, or terminates the Contract in application of Section 3 above , the Bidder(s)/ Contractor (s) transgression through a violation of Section 2 above shall be construed breach of contract and the Principal shall be-entitled to demand and recover from the Contractor an amount equal to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee , whichever is higher, as damages, in addition to and without prejudice to its right to demand and recover compensation for any other loss or damages specified elsewhere in the contract.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 (three) years (to be reckoned from date of bid submission) with any other company in any country conforming to the anti-corruption approach in India that could justify his exclusion from the tender process. The date of such transgression, for the purpose of disclosure by the bidders in this regard, would be the date on which cognizance of the said transgression was taken by the competent authority. The transgression(s), for which cognizance was taken even before the said period of three years, but are pending conclusion, shall also be reported by the bidders.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason or action can be taken as per the separate "Guidelines on Suspension of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 6 - Equal treatment of all Bidder (s)/ Contractor (s) / Sub-contractor (s)

- 6.1 The Principal will enter into Integrity Pacts with identical conditions as this Integrity Pact with all Bidders and Contractors.
- 6.2 In case of a joint venture, all the partners of the joint venture should sign the Integrity Pact. In case of Sub-contracting, the Principal Contractor shall be solely responsible for the adherence to the provisions of IP by the sub-contractor(s).
- 6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity Pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

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Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 45 of 147

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

Section 8 -Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible panel of Independent External Monitor (s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact on receipt of any complaint by them from the bidder(s).
- 8.2 The IEMs are not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as /Top Secret are not to be disclosed.
- 8.4 The Principal will provide to the IEMs sufficient information about all meetings among the parties related to the Contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the IEMs the option to participate in such meetings.
- 8.5 The role of IEM is advisory and the advice of IEM is non- binding on the Organization. However, as IEMs are invariably persons with rich experience who have retired as senior functionaries of the government, their advice would help in proper implementation of the IP.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of the tendering process, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an examination, and submit their joint recommendations to the Management. In case the full panel is not available due to some unavoidable reasons, the available IEM(s) will conduct examination of the complaints. Consent of the IEM(s), who may not be available, shall be taken on record.
- 8.7 The IEMs shall examine all the representations/grievances/ complaints received by them from the bidders or their authorized representative related to any discrimination on account of lack of fair play in modes of procurement and bidding systems, tendering method, eligibility conditions, bid evaluation criteria, commercial terms & conditions, choice of technology/ specifications etc.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the IEMs and its terms and conditions.
- 8.9 IEMs should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the Principal should be looked into by the CVO of the Principal.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 46 of 147

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- 8.10 If the IEMs have reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code / Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs.
- 8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.
- 8.13 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.
- 9.2 If any claim is made/ lodged during currency of this Integrity Pact, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.
- 10.2 Changes and supplements as well as termination notices need to be made in writing.
- 10.3 If the Bidder(s)/ Contractor(s) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.
- 10.4 Should one or several provisions of this Integrity Pact turn out to be invalid, the remainder of this Integrity Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this Integrity Pact with the Principal would be competent to participate in the bidding. In other words, entering into this Integrity Pact would be a preliminary qualification.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 47 of 147

- 10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. If required, the Principal may adopt any mediation rules for this purpose. However, not more than five meetings shall be held for a particular dispute resolution. The fees/expenses on dispute resolution shall be equally shared by both the parties. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as per the terms & conditions of the Contract.

For & On behalf of the Principal
Bidder/ Contractor
(Office Seal)
(Office Seal)

Place _____
Date _____

Witness: _____
Witness: _____
(Name & Address) _____

For & On behalf of the

(Name & Address)

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 48 of 147

[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/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

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:

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 49 of 147

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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E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 50 of 147

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/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

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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Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 51 of 147

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/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268,

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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E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 52 of 147

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.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 53 of 147

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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Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 54 of 147

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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 55 of 147

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.~~

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 56 of 147

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: -

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 57 of 147

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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 58 of 147

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. Clause for Existing Contractor:

Existing Contractor** to whom the subject work for “Balance Civil and architectural works of main plant FGD Civil works of Unit#4 (1X500MW), Unit#5 (1X500MW) & Unit#6 (1X500MW) including Civil works of Fire Protection System, Misc. Tanks, Misc. Pump House & Sump, Pipe/Cable Rack, Duct Supports, Road, Drains, Water Supply, Sanitation etc. at NTPC Ramagundam TPS Stage-I & II (3X200MW + 3X500MW) FGD Package ” has been awarded earlier by BHEL shall not be eligible to quote against this tender.

**** Existing Contractor/Supplier will include:**

- i). In case Previous contractor/supplier is The Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor.
- ii). In case Previous contractor/supplier is The Partnership Firm, any firm comprising of same partners/ some of the same partners (but not including any new partner); or sole proprietorship firm owned by any partner(s) as a sole proprietor.

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Page 59 of 147

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/RGFGD-BAL-MAIN-CIVIL-U-4-5-6/3268

Job Balance Civil and architectural works of main plant FGD Civil works of Unit#4 (1X500MW), Unit#5 (1X500MW) & Unit#6 (1X500MW) including Civil works of Fire Protection System, Misc. Tanks, Misc. Pump House & Sump, Pipe/Cable Rack, Duct Supports, Road, Drains, Water Supply, Sanitation etc. at NTPC Ramagundam TPS Stage-I & II (3X200MW + 3X500MW) FGD Package

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:

3268

TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHARAT HEAVY ELECTRICALS LIMITED

TECHNICAL CONDITIONS OF CONTRACT (TCC) CONTENTS

SL. NO.	DESCRIPTION	CHAPTER
Volume-IA	Part-I: Contract specific details	
1	Project Information	Chapter-I
2	Scope of Works and Technical Specifications	Chapter-II
3	Facilities in the scope of Contractor/BHEL (Scope Matrix)	Chapter-III
4	T&Ps and MMEs to be deployed by Contractor	Chapter-IV
5	T&Ps and MMEs to be deployed by BHEL on sharing basis	Chapter-V
6	Time Schedule	Chapter-VI
7	Terms of Payment	Chapter-VII
8	Taxes and other Duties	Chapter-VIII
9	Technical Specifications and Plot Plan	Chapter-IX
10	General	Chapter-X
11	BOQ and % weightage for amount of individual items of Schedule of quantity	Chapter-XI

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-I: Project Information

1.0	Project Information: NTPC Ramagundam TPS Stage-I&II (3x200MW + 3x500MW) FGD Package.
1.1	<u>INTRODUCTION:</u> The proposed site is located at Ramagundam in Peddapalli district of Telangana. Latitudes : 18° 45'18"N Longitudes : 79° 27'22"E Place : Ramagundam District : Peddapalli Nearest Railway Station : Ramagundam (5 KM) Nearest Airport : Hyderabad (250 KM) Nearest Town/city : Karimnagar (51 KM) Above information furnished are for general guidance of Contractor. However, Contractor has advised to visit the site and appraise himself about the conditions of site and infrastructure available in the area for fulfilling their commitments under the contract.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

2.0 SCOPE OF WORK

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

The works to be performed under this specification include execution of complete balance civil and architectural works for foundations for equipment, buildings, facilities, substructures, superstructures including inserts as per the detailed scope and specification enclosed elsewhere in this tender document. The works includes supply of all materials, consumables, tools etc. as per approved drawings and specification on item rate basis.

Following area/structures are broadly covered under this Package:

- (I) Balance Civil and Architectural works of Main plant FGD Civil works of Unit #4,5&6 (3x200 MW) which covers the following:
1. Duct foundations in Unit # 6, RCPH foundation in Unit # 5 & absorber drain pit in Unit # 6.
 2. Balance miscellaneous equipment foundations, road & drains.
 3. Balance heavy duty & normal duty paving in all balance areas including IPS flooring, drains/trenches, hume pipe culverts & laying earthing rod etc.
 4. Balance finishing & BOIs works in FGD control & switch gear buildings.
 5. Balance duct banks, cable trenches/slits, pre-casts & transformer area fencing works.
 6. Balance civil works in ACW/DMCW building & balance peripheral drains with plinth protection in all the buildings.
 7. Balance plumbing, sanitary work, sewerage line network with hume pipes, spun cast iron pipes, manholes & BOIs for readiness of toilets in buildings.
 8. Balance fire line pedestals/trenches, precast, DV sheds & laying hume pipes for fire lines.
 9. Restoration of dismantled existing facilities in plant area & dressing of soil to finished ground level in FGD stage-I & II area with disposal of excess soil & debris.
 10. Supply and installation of Steel Doors in TP 40 & 41 at various levels at **2x800MW NTPC Telangana Project**.

However, the names of the structures may change later during the detailed engineering stage

The scope of works mentioned above under “item rate basis” includes all works like, excavation, leveling & grading, dewatering, back filling, shoring & strutting, foundation

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

works, super structures (RCC), sheeting (metal deck/ cladding), brick work, staircase, equipment foundations, foundation bolts, embedment, grouting, waterproofing, cementitious coating, walkways, openings, doors and windows with glazing, false ceiling, fencing, plumbing, waterproofing, sanitary works, down-comer pipes, plinth protection & grading, garland drain all-round the periphery of the structure, ramp in front of doors, roads, drains , other finishing works, dismantling & disposal of roads/drains/foundations as applicable for construction of new facilities as per drawing/ instruction of engineer in-charge, restoration of dismantled facility as applicable, etc for the total completion in all respect as per the approved drawings. The rates quoted shall be inclusive of all the works mentioned above for the total completion of structures.

Approved drawings shall be issued by BHEL for the works covered under item rate basis.

The work to be performed under this specification shall include all incidental items not mentioned or specified but reasonably implied or necessary for the completion and proper functioning of the plant, all in strict accordance with the specifications including revisions and amendments thereto as may be required during the execution of work.

This specification covers the methodology to be followed for construction of all balance civil and architectural works for the completion of civil works of this package. Description of various items of work and nature of work involved under this specification are given hereinafter. The items, though not specifically mentioned, but are needed to make the system complete shall be treated as though included and the same shall also be furnished and erected / constructed unless otherwise specifically mentioned as excluded.

The bidder should also note the following details, pertaining to the scope of civil works under this specification:

- i) The civil works to be performed shall cover providing all labour, materials except free issue materials like **reinforcement steel, structural steel and cement** mentioned elsewhere, construction equipment, tools and plant, scaffolding, supplies, transportation, all incidental items necessary for successful completion of the work. The work shall involve earthwork in excavation, levelling & grading, rig mobilization, de-watering, shoring and strutting, foundation works, back filling around completed structures and plinth protection, area paving, disposal of surplus excavated materials, concreting including reinforcement and form work, brick work, miscellaneous steel works, inserts, foundation bolt fixing, architectural items & finishes such as plastering, painting, flooring, doors, windows & ventilators, glass and glazing, rolling shutters etc., metal decking, permanently colour coated profiled steel sheeting, sandwich cladding sheet, anchor bolts, RCC, trenches with covers, laying and testing of water pipes, sanitation, water supply, drainage, damp proofing, fencing, water proofing and roads, drains other ancillary items.
- iii) The work shall be carried out both below and above ground level and shall include basements, equipment foundations, grouting, slabs, beams, columns, footings, rafts, walls, brick walls, stairs, trenches, pits, access roads, culverts, buildings for switchgear and control room, finishes, complete architectural aspects, drainage, sanitation, water supply (from terminal points to various buildings and all other civil, structural and architectural works.
- iv) Access roads to all buildings/facilities including construction and maintenance of temporary access roads for approach to the building/facilities for construction/erection activities.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- v) The scope of work also includes attending meetings at BHEL office at site / BHEL Nagpur office, Owner's place in Site or at places decided by Owner as and when necessary for review, discussions, co-ordination, etc.
- vi) Contractor shall set up stores for Cement, sand, deck plate, bolts, aggregate etc., and all are stored properly as per IS recommendation. Wastage due to lapse of storing will be on account of contractor.
- vii) Contractor shall maintain proper records of test reports, bar bending schedule and to be produced to concerned Engineer whenever required.
- viii) Contractor shall be responsible for coordinating with the erection agency as well as BHEL for maintaining proper line, elevation, coordinate as per drawing. Any mismatches/ fouling with existing structure to be highlighted to BHEL. Dismantling of structure due to lack of coordination/Survey will be on contractor's account.
- ix) BHEL will supply reinforcement, Cement to contractor on free issue basis. Supply of all other items including handrail, grating, foundation bolts, metal deck, shuttering item, inserts, water proofing material, admixture etc. will be done by contractor as per item rate description. All item to be supplied as per customer NTPC specification with prior approval from NTPC/BHEL.
- x) **Submission of construction methodology/procedure in line with the NTPC technical specifications and obtaining approval from NTPC/BHEL wherever applicable as per instruction of engineer in charge.**

xi) **Setting Up of Laboratory Works: -**

The contractor shall set up his own laboratory in the very close vicinity of the work site **as per indicative field QA&QC laboratory set up based on** directions of engineer-in-charge. Alternatively, the contractor may tie up with an existing field laboratory for carrying out daily testing requirements, without any additional cost to BHEL.

The laboratory shall be equipped with latest testing equipment in sufficient number to carry out all the tests as required under a contract. The contractor should ensure that the equipment is available well in advance of starting of the work to avoid stoppage of work on this account.

All the tests shall be carried out by the contractor in the presence of the Engineer's representative and a joint record of all observations and results thereof shall be maintained, and available with the Engineer.

2.1 CIVIL AND ARCHITECTURAL WORKS

The scope covers all Civil and Architectural works within the battery limits:

The important works covered under this package are as below:

- 2.1.1 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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- 2.1.2 Construction 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.
- 2.1.3 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.
- 2.1.4 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.
- 2.1.5 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.
- 2.1.6 Fabrication and fixing of templates/frames, inserts, fixing of anchor bolts, sleeves, and embedments etc. in concrete.
- 2.1.7 Supply of all instruments and personnel for conducting necessary tests at site as specified/as directed by the Engineer.
- 2.1.8 Mix Design(M 15, M 20, M 25 ,M 30, M 35/M 40) or as required for all concreting works as per schedule of items and technical specifications shall be carried out either at site or from a reputed institute approved by NTPC, contractor has to ensure adding of admixture and minimizing of cement content in line with IS 456 as advised by BHEL time to time without any additional cost.
- 2.1.9 **BHEL shall provide the concrete mix designs presently being used at the Ramagundam site. 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.**

2.2 General Scope:

- 2.2.1 Furnishing all labour, materials, supervision, construction plans, equipment, supplies, transport, to and from the site, fuel, compressed air, and all other incidental items and temporary works not shown on specified but reasonably implied or necessary for the proper completion, maintenance and handling over the works, except in accordance with the stipulations laid down in the contract documents and additional stipulations as may be provide by the engineer during the course of works.
- 2.2.2 Furnishing samples of all materials required by the engineers for testing/inspection and approval of BHEL/NTPC for use in the works. The samples may be retained by the engineer for final incorporation in the works.
- 2.2.3 Furnishing test reports for the products used or intended to be used, if called for the specifications or if so desired by the engineer.
- 2.2.4 Giving all notices, paying all fees, taxes etc., in accordance with the general conditions of contract, that is required for all works including temporary works.
- 2.2.5 Arranging manufacturer's supervision for items of work done as per manufacturer's specifications when so specified.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- 2.2.6 Carrying out topographic survey of the entire and establish levels and coordinates at suitable intervals from existing grid levels and coordinates furnished by the owner established bench marks, setting out the locations and levels of proposed structures, constructions and marking of reference pillars and other identification works etc., The contractor shall provide the owner/BHEL such a assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used.
- 2.2.7 Providing all incidental items not shown or specified but reasonably implied or necessary for the successful completion of the work in accordance with contract.
- 2.2.8 Arranging for joint checking (with BHEL/BHEL's Customer/Consultant) of all site construction activities Preparation of joint protocols for each & every activity and maintaining quality records for audit/inspection as per approved FQP by BHEL.
- 2.2.9 The drawings enclosed with this tender are intended to give the tenderer a general idea of the type and extent of work involved. The drawings are as such only indicative and not to be considered as the exact construction drawings.
- Further this is to be noted that the drawings and the documents furnished along with this specification are the sole property of B.H.E.L. It must not be used directly or indirectly in any way detrimental to the interest of the company.**
- 2.2.10 The scope of work will also include such other related works although they may not be specifically mentioned in the above paragraph and all such incidental items not specified but reasonably imply and necessary for completion of the job as a whole all as desired and as directed by the engineer.
- 2.2.11 The detail scope of work covered above is not a comprehensive list of items of work involved. The detail scope of work may vary considerably depending on the actual construction requirements as per RFC Drawings.
- 2.2.12 The contractor shall provide adequate storage, testing and office facilities with approval from the engineer. The rate quoted by the contractor shall be deemed to include for these and no separate payment will be made towards these. On completion of work, the site shall be cleaned by the contractor of all materials, temporary sheds, debris, rubbish plants and equipment's, belonging to the contractor at no extra cost. The site and surroundings shall be handed over in neat and clean conditions. Periodical housekeeping shall be done by contractor as per the instructions of BHEL and NTPC at no extra cost. In case of any failure by the contractor, the employer will get set at risk and cost of the contractor. The construction site, office premises, roads etc. shall be maintained dust free with periodic water sprinkling or suitable methods without any extra cost to BHEL.
- 2.2.13 **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 signing of the protocol shall not be entertained by BHEL.**

2.3 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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

Following work is excluded from this scope of work: -

- 1) Chimney Civil work
- 2) Shop Fabrication work.
- 3) Erection of bolted shop fabricated structure.

2.4 SITE VISIT

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

2.5 Carrying out work by BHEL

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

NOTE:

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

2.6 PREAMBLE FOR THE SCHEDULE OF QUANTITIES/BOQ.

- 2.6.1 Details of the items in this Schedule shall be read in conjunction with the Corresponding Consultants/NTPC specifications, drawings and other documents and shall have precedence over any contrary statement mentioned anywhere in this document.
- 2.6.2 The work shall be carried out as per construction drawings, specifications, the description of the items in this schedule and/or Engineer's instructions, Drawings enclosed with these documents are only indicative giving some idea of the type of work involved. The layout, sizes and details of the building, structures and foundations shown in tender drawings may vary at a large extent during actual construction. Final drawings will be issued progressively during the execution of the work.
- 2.6.3 Items of work provided in this schedule but not covered in the specifications shall be executed strictly as per instructions of the Engineer.
- 2.6.4 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.
- 2.6.5 The rate quoted shall be inclusive of cleaning the site of any vegetations, dressing and levelling etc., required for commencement of site activities. The rates shall

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

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

- 2.6.6 The rate shall also be inclusive of carrying out topography survey of site to establish levels and coordinates at suitable intervals, form 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.
- 2.6.7 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.
- 2.6.8 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.
- 2.6.9 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.
- 2.6.10 Mix design (M 20, M 25, M 30, M 35/M40) for all concreting shall be carried out either at site or from a reputed institute, contractor has to ensure adding of admixture and minimizing of cement content in line with IS 456 as advised by BHEL time to time without any additional cost.
- 2.6.11 The scope shall also include setting up by the bidder a testing laboratory (one AC lab size 4.5mtrx6mtr and 1 non AC lab 4.5 mtrx4.5 mtr.) in the field to carry out all relevant tests. Detail of laboratory equipment's as per NTPC specification to be arranged by the contractor within quoted rate for conducting day to day tests. The contractor may tie up with approved/registered inspection agencies for setting up test lab at site as described above.
- 2.6.12 Installation of necessary amenities- temporary infrastructure for construction activities at Project site locations- following are the minimum amenities to be provided by the bidder without any extra cost and removal/disposal of the same in environment friendly manner after its intended use/completion of complete scope of work:
1. Labour rest sheds near work spot.
 2. Canteen facility creation.
 3. Drinking water facility.
 4. Labour toilets near work spot in sufficient nos. with regular cleaning & maintenance arrangement
 5. Labour colony should have all hygienic condition, dining hall, toilets, proper sewerage system, good drinking water arrangements.

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

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

2.7 HIERARCHY

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

- 1) Statutory Regulations
- 2) NTPC Technical specification/Section C Technical specifications.
- 3) Items in Schedule of quantities
- 4) IS standards
- 5) BHEL's standard specification (Section D).

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

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

2.9 Construction Power:

- 2.9.1 Construction power (three phase, 415 V/ 440 V) will be provided near the site at a distance of approx. 500M on chargeable basis (source of construction power shall be provided at two locations). Further distribution shall be arranged by the contractor at his own cost and services. Contractor shall be responsible for fulfillment of all requirements including statutory requirements in this regard. Contractor shall deploy and install required energy meter, cables, fuses, LT distribution boards, switchboards, bus bars, earthing arrangements, protection devices i.e, required capacity ELCB/RCCB in outgoing feeders and any other installation as specified by statutory authority/act. Contractor shall also obtain approvals of appropriate authority and pay necessary fees, levies etc towards the clearance of such installations, prior to use. Sufficient power factor compensation equipments like capacitor shall be provided by contractor for reactive loads like welding machines etc. In case of any fine/penalty on account of low power factor, same shall be shared by contractor proportionately according to power consumption.
- 2.9.2 Contractor shall make necessary arrangements for onward distribution of construction power taking due care of surrounding construction activities like movement of cranes & vehicles, civil work, fabrication/construction/assembly/ erection etc and safety of personnel. It may become necessary to relocate some of the installations to facilitate work by other agencies or by him.
- 2.9.3 It shall be the responsibility of the Contractor to provide, maintain the complete installation on the load side of the supply with due regard to the safety requirements at site. All cabling and installations shall comply in all respects with the appropriate statutory requirements. The installation and maintenance of this shall be done by licensed and experienced electrician.
- 2.9.4 While reasonable efforts will be made to ensure continuous electric power supply, interruptions cannot be ruled out and no claim from the Contractor shall be entertained on this account such as idle labor, extension of time etc. The

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

Contractor shall adjust his working shift accordingly and deploy additional manpower, if necessary, so as to achieve the target.

- 2.9.5 Contractor shall be well equipped with back-up power supply arrangement like DG set and diesel operated welding machine etc to tackle situations arising due to failure of supplied power, so as to ensure continuity and completion of critical processes that are underway at the time of power failure or important activities planned in immediate future.
- 2.9.6 BHEL is not responsible for any loss or damage to the Contractor's equipment as a result of variations in voltage or frequency or interruptions in power supply.
- 2.9.7 Contractor is advised to maintain the calibrated energy measuring instruments and use their system as efficiently as possible. to maintain the HT side input energy meter reading and LT side outgoing energy meter reading to sub-contractors as equal. In case there is any difference between the sum of the LT side meter readings of all sub-contractors and the HT side meter reading of M/s NTPC, same shall be distributed proportionately among all sub-contractors working during the respective calendar month.
- 2.9.8 The bidder will have to Procure & install General mobile illumination system during construction right from start of his work. This system will include temporary pole lighting, portable lighting towers with DG back-up, within the quoted price. The illumination should be such that minimum illumination requirement as specified by Indian standards for general illumination is maintained.
- 2.9.9 The charges only for the actual energy consumed by the contractor shall be recovered based on prevalent rate of DISCOM.

GENERAL: -

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

2.10 Construction water:

Contractor shall make all arrangements himself for the supply of construction water as well as potable water for labour and other personnel at the work site/ colony. However, drawal of construction/ potable water from the bore-well shall be permitted if found suitable. Any statutory clearance required shall be obtained by the contractor. Assistance, if required shall be provided by the BHEL/NTPC.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

2.11 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.

2.12 Reconciliation of Material issued by BHEL (free of cost):

2.12.1 General Notes:

- (a) Cement and Reinforcement Steel required for the tender scope shall be procured by BHEL and issued to contractor free of cost (As FOC Item). However, unloading, handling / storage of Cement and Reinforcement steel procured by BHEL for this tender scope, at site, inside BHEL Stores / Contractor's Stores and further transportation from Stores to work area will be in the scope of contractor. No Extra payment shall be made for this work.
- (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 200 MT/ 4000 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, 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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- (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.

2.13 HANDLING OF MATERIALS ISSUED BY BHEL:

- 2.13.1 Materials shall be issued by BHEL based on the weighment basis/linear measurements & sectional weight. However, on specific request of the contractor **“as a special case to expedite the job”** the consignment received at BHEL stores can directly be diverted to the work site following issuance procedure of BHEL. Such direct issues shall be as per the Challan/dispatch document/LR received with the consignment. In such cases, Contractor shall do unloading of materials from trucks/lorry at their own cost.
- 2.13.2 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.
- 2.13.3 The contractor shall take delivery of the materials from the designated place within the project premises at his own cost and store the same at his stores as per standard norms. Open land for such purposes shall be provided by BHEL on free of cost basis. Temporary barbed wire fencing of the open storage yard is to be done by the contractor and is included under the scope of his work. Contractor shall also remove grass, bushes, trees etc wherever required off the land provided to him and shall make proper continuous up keeping of the open yard /land by removing grass, bushes trees etc and same is included under the scope of his work & No extra payment shall be made to the contractor in this regard. The bidder shall make complete arrangement of necessary security personnel's to safeguard all such materials in his custody. Materials issued will be used only for construction of permanent works. The contractor shall take care of material issued by BHEL and shall protect the same from theft, damage and weathering. Excessive rusting of steel in custody of agency/contractor must be avoided. **In case, due to any cause attributable to the contractor, such rusting of steel occur rendering the same unusable, then such quantity of steel shall be recovered from the interim payment at the penal rate specified in the tender.**

2.14 Issue of Cement (Free of Cost)

- 2.14.1 Cement as received from the manufacturer/ stockiest will be issued free of cost to the contractor. 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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- 2.14.2 In case cement is issued through bulkers being supplied from manufacturer/stockiest; the same shall be emptied in cement silos of batching plant and necessary assistance shall be provided by contractor.
- 2.14.3 In case BHEL supplies cement through Bulker, Bidder has to store cement in Silos of Suitable capacities as decided by Engineer in charge. Silos Capacities shall be finalized mutually.
- 2.14.4 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.
- 2.14.5 No cement will be issued on free basis for bought out item like **Hume pipe, Interlocking Paver block, Fly ash brick etc.** However, cement for mortar for fixing of these items if required will be issued on free basis.

2.15 ISSUE OF STEEL.

- 2.15.1 The steel shall be issued to the contractor on the following basis:
- Structural Steel: Weighment basis (Unit - MT)
 - Reinforcement Steel and Earthing Rod: Weighment basis (Unit-MT)
 - GI Gratings: Weighment Basis (Unit- MT/As Received from manufacturer)
 - MS Rails: Weighment Basis (Unit-MT)
- 2.15.2 All the steel (structural, reinforcement, earthing rod/GI flats, GI gratings, foundation bolts, MS Rails) 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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- 2.15.3 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.
- 2.15.4 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.
- 2.15.5 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.
- 2.15.6 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, GI grating, Foundation bolts,	ONE MONTH
02.	Cement	ONE MONTH
03.	Structural steel	ONE MONTH

- 2.15.7 Bidders shall ensure that no lamination material is taken over by them from BHEL.
- 2.15.8 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.

2.16 RETURN OF MATERIALS

- 2.16.1 **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.
- 2.16.2 **Return of Reinforcement Steel and Structural Steel including Scrap:** All surplus steel and all wastage materials will be taken back on weightment basis. Surplus, unused and untampered steel shall be sorted section-wise and returned separately at a place directed by BHEL/Engineer within the project area. Return of such materials will not be entitled to any handling and incidental charges. All wastage / scrap (including melting scrap, wastage, and unusable scrap) shall be promptly returned to the stores and a receipt obtained for material accounting purposes. Return of such material will not be entitled to

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

any transportation and incidental charge. Scrap for reinforcement steel and structural steel shall be returned separately.

2.17 Scrap and Serviceable Materials:

- 2.17.1 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.
- 2.17.2 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**.
- 2.17.3 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.
- 2.17.4 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.

2.18 Cement, Steel Consumption and wastage:

2.18.1 **Cement Consumption:**

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

- For design mix concrete as per approved design mix.
- For nominal mix concrete work, as per minimum cement as specified or as approved by engineer-in-charge.
- 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.
- 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).

2.18.2 **Cement Wastage:**

- 2.18.2.1 **Allowable wastage:** One and half percent (+1.5%) of theoretical consumption of cement.
- 2.18.2.2 For any material issued by BHEL to the contractor free of cost, and which is not accounted for by the contractor to BHEL, then recovery for such material shall be affected at penal rates.

Sl no.	Cement consumption	Basis of issue & penal recovery
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TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

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

2.18.3 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.

2.18.3.1 Actual consumption = Issue - Surplus.

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

2.18.3.3 Wastage = Actual consumption - Theoretical consumption.

2.18.4 Reinforcement Steel, MS earthing rod, GI gratings, Foundation bolts and MS Rails Wastage

2.18.4.1 **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
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

2.18.5 Structural Steel Wastage

Allowable wastage: 4% (FOUR percent) of the theoretical consumption shall be considered. Wastage shall be considered as cut pieces and scrap material,

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

measured as per actual weighment basis. Invisible wastage, if any, shall be considered to be included in the specified 4 % allowable wastage.

Sl 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

2.19 Reconciliation of Materials:

- 2.19.1 The contractor shall submit a reconciliation statement of cement and steel issued to the contractor with each RA Bill.
- 2.19.2 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 are available in the contractor custody at site.
- 2.19.3 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.
- 2.19.4 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.

2.20 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:

Sl. No.	Items	Penal Rates (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	MS Flats, beams, channel, angles etc. (Rolled Sections)	65,000 per MT
P-4	Foundation bolts if supplied by BHEL	90,000 per MT

2.21 Procurement and Testing of Materials by Contractor:

Material required for the entire job (other than issued by BHEL as explained above) like sand, aggregates, windows, doors, ventilators, rolling shutter, sanitary fixtures, painting & finishing material, electrical fittings and wiring material and all other material required for the completion of entire scope have to be arranged by the contractor, except those

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

specifically indicated as BHEL scope of supply. BHEL reserves the right to reject any material not found satisfactory. Rates quoted shall be inclusive of all such contingencies and no additional payment shall be made on this account. For this purpose, sample shall be collected at site in presence of BHEL/NTPC representative.

Bidders are requested to specifically note the following:

Bidders are requested to have pre-bid visit/ inspection of site to make them fully acquainted with the site situation & nature of job. No claim shall be entertained at later date on account of non-familiarization of site conditions. Bidders may fix up their site visit in consultation with below mentioned contact person:

Sh Balaji.M / Sr. Engineer /PMX-Civil PSWR Nagpur Ph no: 8600000268
Sh Aniruddh Yadav, Manager Civil BHEL NTPC Ramagundam Site Phone No: 9099073908

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

Sl.No	Description	Scope		Remarks
		BHEL	Bidder	
	PART I			
3.1	Establishment			
3.1.1	For Construction Purpose:			
A	Open space for office (as per availability)	Yes		Location will be finalized after joint survey with owner
B	Open space for storage (as per availability)	Yes		Location will be finalized after joint survey with owner
C	Construction of bidder's office, canteen and storage building including supply of materials and other services		Yes	
D	Bidder's all office equipments, office / store / canteen consumables		Yes	
E	Canteen facilities for the bidder's staff, supervisors and engineers etc		Yes	
F	Firefighting equipments like buckets, extinguishers etc		Yes	
G	Fencing of storage area, office, canteen etc of the bidder		Yes	
3.1.2	For living purpose of the bidder			
A	Open space for labour colony (as per availability)		Yes	Contractor has to make his own arrangements for shelter and transportation of labours as per requirement.
B	Labour Colony with internal roads, sanitation, complying with statutory requirements		Yes	
3.2.0	ELECTRICITY			
3.2.1	Electricity for construction purposes 3 Phase 415/440 V			CHARGEABLE
A	Single point source	Yes		CHARGEABLE. At two locations. Further distribution and Metering is in scope of bidder. Refer clause 2.9

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

Sl.No	Description	Scope		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	<i>Electricity for office, stores, canteen etc of the bidder.</i>			
A	Single point source	Yes		Chargeable. Contractor Has to make his own arrangements from point source as per 3.2.1.A
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	<i>Electricity for living accommodation of the bidder's staff, engineers, supervisors etc</i>			Contractor Has to make his own arrangements
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	<i>WATER SUPPLY</i>			
3.3.1	<i>For construction purposes: (to be specified whether chargeable or free)</i>			
A	Making the water available at single point		Yes	Contractor has to make his own arrangement.
B	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.2	<i>Water supply for bidder's office, stores, canteen etc.</i>			
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	<i>Water supply for Living Purpose</i>			Contractor has to make his own arrangement.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

Sl.No	Description	Scope		Remarks
		BHEL	Bidder	
	PART I			
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	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.9.0	Erection Facilities			
3.9.1	Engineering works for construction:			NOT APPLICABLE
A	Providing the erection/constructions drawings for all the equipments covered under this scope	Yes		For Details PI refer Chapter-IX-

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

Sl.No	PART II Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.9.0	Erection Facilities			
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		Yes	Changes are to be marked in drawing & handover to BHEL on completion of work.
D	Shipping lists etc for reference and planning the activities			NOT APPLICABLE
E	Preparation of site erection schedules and other input requirements	Yes	Yes	In consultation with BHEL
F	Review of performance and revision of site erection schedules in order to achieve the end dates and other commitments	Yes	Yes	In consultation with BHEL
G	Weekly erection schedules based on 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 are completed as per schedule. It is suggested this review by the senior official of the bidder should be done once in every two months.		Yes	

Note: Additional single point source for construction power may be provided on chargeable basis based on availability of such sources.

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 w.r.t. monthly plan and review format (F-14) based on site requirement. Below given Nos are tentative for planning purposes by the bidder.

Sl No.	Description of T&P	Quantity
1.	Concrete batching plant (18Cum/Hr. or 30 Cum/Hr.)	01No. or more as per requirement
2.	Concrete Pump (30/45 Cum/Hr min capacity & lift 50M)	01No. or more as per requirement
3.	Concrete Transit Mixer	02 Nos or more as per requirement
4.	Concrete Boom placer	As per requirement.
5.	SLUDGE / SLURRY PUMP (DIESEL / ELEC)	As per requirement.
6.	Electrical Winch (of required capacity)	As per requirement
7.	Vibrators(electrical/diesel)	4 Nos
8.	Air Compressor/Air blower	01 No.
9.	Concrete breaker (HILTI/STANLEY or equivalent)	01 No.
10.	Power Trowel	As per requirement
11.	Groove Cutting Machine	As per requirement
12.	Welding Machine	As per requirement
13.	Self-priming Dewatering pump of various capacity (Diesel/Electric) From 2 HP to 7.5 HP	As per requirement
14.	Curing / dewatering pump - 1.5 / 2 HP	04 Nos or more as per requirement
15.	Hydraulic Excavator /Poclain	01 Nos. or more as per requirement
16.	JCB	As per requirement.
17.	- Ply Shuttering board with adequate supporting structure - (Old steel shuttering plates will not be allowed). - Steel shuttering (fare face)	Lot (As per requirement)
18.	Farana crane	As per requirement.
19.	Trailer (20MT Capacity)	As per requirement.
20.	Tractor mounted grader/ loader	As per requirement.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter- IV: T&Ps and MME to be deployed by Contractor

21.	Pipe Scaffolding, Clamps / Swivel Couplers (One/Two Way), Props, Jacks, Screw Heads, MS Pipes, Wooden Battens, Planks, Bullies, H Frames, Tie Rods with Nuts, Adjustable Achro Span (Considering Individual Areas)	As per requirement.
22.	Dumper	02 Nos or more as per requirement
23.	Reinforcement bending machine	01 No. or more as per requirement
24.	Reinforcement cutting machine	01 No. or more as per requirement
25.	MS scaffolding pipe with matching Couplers	As per requirement
26.	Plate compactor	As per requirement
27.	Earth Compactor	As per requirement
28.	Cable locator	01 No
29.	Vacuum Dewatering machine	01 Nos or more as per requirement
30.	Total Station	01 Nos or more as per requirement
31.	Auto level & staff	02 Nos or more as per requirement
32.	Vibro roller of suitable capacity	To be mobilized as per site requirement
33.	Water Tanker	As per requirement
34.	All equipments for area lighting like halogen bulbs and Portable light towers etc.	As per requirement
35.	All equipment required to install temporary MS Casing of 12 m or required length like vibro hammer & suitable capacity crane etc.	As per requirement
36.	DG Set 125 KVA	As per requirement
37.	COMPUTER with printing/photocopy & CD writing facility	As per requirement

FIELD QUALITY LAB EQUIPMENTS AS PER LIST ENCLOSED WITH THIS TENDER DOCUMENTS

4.2 MEASURING AND MONITORING DEVICES (MMD):

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter- IV: T&Ps and MME to be deployed by Contractor

AS PER REQUIREMENT TO BE FINALIZED AT SITE.

4.3 COMPUTER INFRASTRUCTURE

The successful bidder(s) will have to establish computerized project management system along with one no supervisor with sufficient computer knowledge (knowledge of MS office) and the following are the minimum requirements of the system:

- 4.1.1 The bidder will have to install 1 nos PCs (multimedia PC work station Pentium-Duo, 1 GHZ or above, 320 GB HDD, 2 GB RAM, 100 MBPS LAN card of HCL/ COMPAQ/ ZENITH or equivalent make with window 8 O/S with required accessories like mouse, keyboard, UPS and required software like MS Office 2010 Professional, AutoCAD 2011, ADOBE PDF CREATOR (ver 8.0) with one no laser jet printer compatible for A4 and A3 size printing (ink/ cartridge for which to be supplied as and when required, (the consumption may be assumed as 1 cartridge per month) with power backup at places, as per instruction of BHEL for exclusive use of BHEL.
- 4.1.2 These computers/ printers along with technical 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.
- 4.1.3 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 pertaining to the contractor's scope of work etc.
- 4.1.4 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.
- 4.1.5 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 8000.00 per month for two computers with printer facility, if the services of computer and printer are being used by BHEL.

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. In the event of non mobilisation of any T&P by the successful bidder and as a result progress of work suffered, BHEL reserves the right to deduct suitable amount from the dues of the bidder, with assigning reasons thereof.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter- V: T&Ps and MME to be deployed by BHEL

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

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter- VI: Time Schedule

6.0 Time Schedule and Mobilization:

6.1 Initial Mobilization and Time Schedule:

After issuance of LOI (through email/fax/courier), Contractor shall report to the Construction Manager of BHEL at site or Project Manager of BHEL at HQ Nagpur within 15 days and make KOM (Kick of Meeting) for mobilization of manpower, T&P, Date of start of work and detailed completion program.

The contractor has to subsequently augment his resources in such a manner that the entire works are completed within the **contract period of (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 date of first excavation. However, the date of start may be reviewed and changed accordingly by Construction Manager/Site-in-Charge/Project Manager of BHEL with recorded reasons in the KOM (Kick of Meeting).

6.2 Contract Period and Schedule of Completion:

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

Schedule of Completion for the Package:

Sl.No.	-Civil work of following Activity	Period from DOS
1	Absorber Foundation for Unit#4	4 th Month
2	ACW Pump House foundation	5 th Month
3	Absorber Foundation for Unit#5&6	6 th Month
4	Foundations works of FGD Control room	6 th Month
5	Foundation for Booster fans for Unit#4	8 th Month
6	Foundation for Booster fans for Unit#5&6	10 th Month
7	Completion of foundation of pipe rack and duct support pedestals	15 th Month
8	Completion of all equipment foundations including floors of Unit#4	14 th Month
9	Completion of all equipment foundations including floors of Unit#5&6	15 th Month
10	Completion of all balance civil works in all respect including road, drains, pavements etc.	18 th Month

6.3 PROVISION OF PENALTY IN CASE OF SLIPPAGE OF INTERMEDIATE MILESTONES:

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter- VI: Time Schedule

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

Milestones	Civil work of following Activity	Period of release of fronts from DOS
M1	Foundations works of FGD Control room	6 th Month
M2	Foundation for Booster fans for Unit#5&6	10 th Month

~~**Note:** Refer clause no. 8 of NIT “Annexure-12-Important Information” 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.

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, 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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Duties

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

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Duties

ANNEXURE-2

BOCW Act & Cess Act

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

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

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Duties

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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IX: Technical Specifications

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

SL NO	Document
1.	Section C -Technical Specification
2.	Section D- General specification of BHEL
3.	General Layout and FGD Layouts
4.	Soil Data

Note: Bore hole/soil data is provided as tender documents for general information and bidder shall have to ascertain the site condition at their own. BHEL will not be responsible for any variation in soil condition from the bore hole/ soil data provided herewith tender.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-X: General

Tentative Manpower Requirements:

- (a) **Project manager - 01** with adequate experience of minimum 10Years in Industrial Foundation, Building & Structural Works, Power Plant Civil & architectural Works.
- (b) Experienced Civil Engineers - 01heads
- (c) Experienced Foreman / Supervisors - 02heads
- (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) Safety Engineer (officer) - 01 head
- (i) Surveyor - 01 head capable to handle total station
- (j) Operator, Licensed Electrician, Mechanic - As per requirement
- (k) Experienced Carpenters & Helpers - lot for similar nature of work
- (l) Experienced Bar Benders & Helpers - lot for similar nature of work.
- (m) Security Guards (Round The Clock) - As per requirement

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 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.

10.3 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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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.**

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

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	Item Description	UNIT	Qty	Weightage
	MAIN CIVIL WORKS OF FGD RAMAGUNDAM			
100	EARTH WORK			
	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:			
A 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, dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead up to 1Km, spreading/levelling of disposed materials etc all complete for following depths below ground level.			
a	Depth from ground level but not exceeding 2 m	CUM	24000.000	2.25470244
b	Depth exceeding 2 m but not exceeding 4 m	CUM	3500.000	0.41131085
c	Depth exceeding 4 m but not exceeding 6 m	CUM	475.000	0.06972619

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A102	Extra over ST No. A101, A103, A105 & A106 for dewatering of ground water by sump pump method as per IS 9759. Ground water table shall be lowered up to 1 m below the founding level to make the site workable for foundation construction till backfilling up to ground level. Mode of measurement shall be the quantity of excavation of soil including ash below ground water table to founding level of the footing.	CUM	3975.000	0.840327
B102	Removal of slush / muck from excavated pit, trenches or foundations, including collection, loading, transportation, unloading and disposal of the same to designated disposal area within a lead up to 1Km, complete in all respects as per directions of Engineer-in-Charge.	CUM	100.000	0.02263437
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, , dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead up to 1 Km, spreading / levelling of disposed materials etc all complete for following depths below ground level.			
a	Depth from ground level but not exceeding 2 m	CUM	900.000	0.15511143
b	Depth exceeding 2 m but not exceeding 4 m	CUM	1200.000	0.20908801
c	Depth exceeding 4 m but not exceeding 6 m	CUM	500.000	0.10454386

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
106	Earth work in excavation in hard rock requiring chiselling including wedging, line drilling, pre shearing etc as required for grading, setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, stacking/disposal of surplus excavated material within a lead up to 1Km, spreading / levelling of disposed materials etc all complete for following depths below ground level.			
a	Depth from ground level but not exceeding 2 m	CUM	450.000	0.70154151
b	Depth exceeding 2 m but not exceeding 4 m	CUM	1300.000	2.43264873
c	Depth exceeding 4 m but not exceeding 6 m	CUM	600.000	0.43295203
A107	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 from compulsorily excavated earth available within a lead up to 1 Km 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	22000.000	2.2443829
b	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	100.000	0.0112551

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
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	1500.000	0.10689114
A109	Extra over ST No. 101 and 103 to A108 for carriage of material/earth for every 500m or part thereof beyond an initial lead of 1km.			
a	Carriage for stacking/ backfilling of serviceable material/ earth	CUM	1000.000	0.01330245
b	Carriage for disposal of serviceable/unserviceable material/ earth	CUM	200000.000	2.6604904
A111	Supplying and filling sand up to any depth under floors, around foundations, plinths, paving, passages, etc. in layers not exceeding 300 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	50.000	0.11680023
200	CONCRETE WORKS			

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
	CONCRETE WORK: 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: (Cement shall be provided free of Cost as per TCC)			
201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as mass filling course, lean concrete, levelling course, mud mat under and around foundations/ floors, at any depth below finished floor level etc.	CUM	1500.000	6.49510822
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	10.000	0.04350012
203	Concrete of grade M15 (1 part cement, 2 part sand, 4 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	110.000	0.48078618
204	Concrete of grade M20 (1 part cement, 1.5 part sand, 3 parts of 20 mm graded aggregate by volume) under floors, paving, plinth protection, pipe encasing etc complete.	CUM	15.000	0.06595433
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	30.000	0.13190866

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
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 all 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.			
a	M 25 Grade	CUM	4300.000	19.97116475
b	M 30 Grade	CUM	20.000	0.0933569
c	M 35 Grade	CUM	5.000	0.02263327
206	Providing and laying Design Mix cement concrete of grade 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 all 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.			
a	M25 Grade	CUM	130.000	0.63088867
b	M 30 Grade	CUM	1.000	0.00508741
c	M 35 Grade	CUM	1.000	0.00458283

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A207	Providing and laying Design Mix cement concrete confirming to IS:456 & IS 10262-2009 for reinforced concrete works of grade mentioned below in machine foundations for TG, Gas Turbine, ID/FD/PA fans, BFP, Coal mills, Booster fans, Ball mills, etc. at all elevations below/above finished floor level except TG deck and top decks supported over vibration isolation system but including TG foundation columns with addition of suitable plasticizer conforming to IS 9103(latest) to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate in concrete all complete as per specification & drawing.			
a	M 30 Grade	CUM	5.000	0.02364366
212	Screed concrete conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at any level or thickness, drains etc complete as per following.			
a	1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume) (M15)	CUM	60.000	0.26257164
b	1:1.5:3 (1 part cement, 1.5 part sand, 3 parts of aggregate by volume) (M20)	CUM	5.000	0.01870032

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
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, 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 (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.			
a	M 25 grade	CUM	1.000	0.00700974
b	M 30 grade	CUM	250.000	1.96704314
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. (Note: removal of stone soling/WBM up to 300mm thickness if found shall be measured and paid separately under item 101a.)			
a	Plain cement concrete of all grades	CUM	150.000	0.17591511
b	Reinforced cement concrete of all grades	CUM	250.000	0.47042387

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
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 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	20.000	0.0014519
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	20.000	0.00011346
218	Cutting Reinforced concrete with mechanized 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	250.000	0.05922831
300	FORM WORKS			
	FORMWORK: 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 ply wood of minimum 12mm thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc. Including chamfering of edges as per drawing, specification and instruction of engineer in charge.	SQM	14000.000	9.75015536

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
302	Fair face form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, etc. including chamfering of edges as per drawing. For all heights as per specification, drawing and instruction of engineer in charge.	SQM	950.000	0.77312904
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 instruction of engineer in charge.			
a	Up to 150 mm depth	EACH	40.000	0.00973462
b	Pockets of depths more than 150mm and up to 300 mm depth	EACH	210.000	0.08214197
c	Pockets of depths more than 300mm and up to 600 mm depth	EACH	18.000	0.01218503
d	Pockets of depths more than 600mm and up to 1000 mm depth	EACH	60.000	0.06241232
400	REINFORCEMENT			
	REINFORCEMENT WORK: 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:.			
401	Providing, straightening, cutting, bending, placing in position at all level, binding of mild steel reinforcements conforming to grade 1 of IS:432 part 1 in concrete including cost of reinforcement steel, binding wire, labour, scaffolding, transportation to & from stores etc. all complete as per specifications & drawings.	MT	0.500	0.03842122

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A402	Providing, straightening, cutting, bending, placing in position at all level, binding in position of steel reinforcements of high yield strength deformed TMT steel bars of grade Fe-500 having minimum elongation of 14.5 % or Fe-500D conforming to IS:1786 including cost of reinforcement steel, binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. (BHEL will supply TMT free of cost as per TCC)	MT	340.000	3.99581547
500	WATER PROOFING WORKS			
	Roof Treatment works: Roof treatment works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, curing, sampling, testing etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			
A506	Providing and applying high solid content liquid applied Urethane based elastomeric water proofing membrane with one coat of polymerised mastic over the RCC roof to achieve smooth surface as primer with an application rate of minimum 6 sq.m per litre and two successive liquid coatings of high solids content urethane pre-polymers or equivalent material based finish coats as per relevant IS/ASTM standards(ASTM C 836 and ASTM C 898), to form an elastomeric membrane with overall dry film thickness 1.5 mm subject to minimum 500 gm/sqm/coat application rate. Item includes surface preparation, polyscrim cloth /fabric, polymerised mortar base preparation, etc all complete as per specifications and directions of engineer in charge.	SQM	640.000	0.68816634

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter-XI Schedule of items Quantities and Factor for deriving
Item Rate from the accepted Lump-sum Price

ST NO	Item Description	UNIT	Qty	Weightage
A507	Providing and laying wearing course consisting of 25mm thick plain cement concrete of grade M15 (1:2:4) with graded aggregate of 12.5mm size cast in panels of maximum size 1.2mx1.2m and reinforced with 0.56 mm dia. galvanised chicken wire mesh and sealing of joints (in grooves of 6mm X 6mm) using silicone sealant /elastomeric water proofing membrane etc all complete.(Cement shall be provided free of Cost as per TCC)	SQM	1500.000	0.70957395
510	Providing and laying cement concrete chequered flooring tiles of 22 mm thickness and size 300x300 mm conforming to IS 13801 with 8 mm thick 1:4 cement mortar over the top most layer of roofing treatment in pathway or entire area with fine joints including sealing of joints (silicon/elastomeric sealant) and providing expansion gap in both directions filled up with (silicon/elastomeric) joint sealant, underbed(as per drawings) etc all complete. (Water proofing paid elsewhere)(including cost of cement for tiles making)(Cement shall be provided free of Cost for mortar only as per TCC)	SQM	400.000	0.26662797
A520	Providing and fixing lining on internal surfaces of sumps with replaceable chlorobuty/bromobutyl rubber lining of minimum 5 mm thickness or with vinly ester based flake glass lining of minimum 3 mm thickness etc. all complete as per specification.	SQM	5.000	0.01453217

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
B522	Providing and fixing waterproofing treatment to be provided on sunken portion of all vertical and horizontal surfaces of depressed portions of false floor, toilets, W.C., kitchen, Pantry and the like consisting of : (i) Ist course of applying cement slurry @ 4.4 kg/sq.m mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. (ii) IInd course of 20 mm cement plaster 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. (iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 kg. per sq.m of area. (iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/sq.m) etc. all complete. (Cement shall be provided free of Cost as per TCC)	SQM	5.000	0.00281515
600	JOINTS AND FILLERS			
	JOINTS AND FILLERS: Joints & fillers including all labour, material, equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			
601	Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumen etc. all complete.			
a	12 mm wide joints.	SQM	150.000	0.09311029
b	20 mm wide joints.	SQM	10.000	0.00741797
c	25 mm wide joints	SQM	150.000	0.16091486
d	50 mm wide joints	SQM	120.000	0.26639661

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
603	Providing and applying polysulphide based sealant conforming to IS:12118 in joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves:			
a	25mmX25mm	RM	5.000	0.00282138
b	50mmX25mm	RM	265.000	0.27623879
604	Supplying and filling in position hot applied bitumen sealing compound (Grade A) confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.			
a	10mm X 40mm	RM	50.000	0.0034772
b	12mm X 25mm	RM	50.000	0.00304681
c	20mmX25mm	RM	1000.000	0.07820262
605	Supplying and installation of commercial quality of expanded polystyrene products from reliable manufacturers as approved by the Engineer, as filler material in joints including nailing, installation as per manufacturer's recommendation etc. all complete.			
Ae	100 mm wide joints with polystyrene board of type-1 conforming to IS: 4671 with density 20 Kg/cum.	SQM	10.000	0.01403371
609	Providing and sealing of joints with premium grade silicon sealant (Silpruf of GE silicons or approved equivalent) including cleaning of joints, raking out groove, joint filler tapes, application of primer, curing, scaffolding etc. all complete as per manufacturer's recommendation for following size groove:			
a	25mmX25mm	RM	588.000	0.15111057
b	50mmX25mm	RM	50.000	0.02299201
610	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following: (Bulb or Kicker type)			

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
d	230 mm wide and 6 mm thick	RM	5.000	0.00157728
613	Providing and fixing G.I strips minimum 1.5mm thk and 150mm wide including fixing accessories etc. all complete.	Kg	150.000	0.0282271
614	Providing and fixing aluminium strips minimum 18 SWG thk and 300mm wide over expansion joints with minimum lap of 50mm length including brass / aluminium screws, rawl plugs etc. all complete.	Kg	520.000	0.25518062
615	Providing and fixing 300 mm wide Stainless steel strips over expansion joints with minimum lap of 50mm length including stainless steel screws, rawl plugs etc. all complete.	Kg	2.000	0.00125862
700	MS EMBEDMENTS			
	MS EMBEDMENTS: Embedments 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:			
h	Supply, fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including welding, bolting, cutting, drilling, scaffolding, setting, manual Cleaning and providing with Primer Coat of Chlorinated Rubber based Zinc Phosphate Primer of Minimum 50 Micron Dry Film Thickness (DFT). etc. all complete.	MT	7.000	0.73992715

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A702	Supply, Fabrication, transportation, delivery at site and erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (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. All threaded and other surfaces of foundation bolts and its materials, insulation pins, Anchor channels, sleeves, etc. shall be coated with temporary rust preventive fluid and during execution of civil works, the dried film of coating shall be removed using organic solvents.	MT	0.100	0.01298396
A703	Same as above items 701, A701 & 702 with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.			
a	Mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions ,structural platform for false ceiling as required etc.	MT	130.000	3.30907441
b	Mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffener plates, protective tape, pipe sleeves, templates etc.	MT	8.000	0.21361824
704	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.			
a	MS pipes of all diameters	Kg	50.000	0.00543716
b	PVC pipes / conduits of all diameters	Kg	56.000	0.02048201

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
c	UPVC pipes / conduits of all diameters	Kg	1310.000	0.60205946
d	Expansion anchor fasteners (galvanised) of HILTI make(HUD-1 Universal Fasteners) or equivalent of safe tensile capacity as specified below for brick work with expansion sleeve of A6 polyamide:			
i	8mm Dia	EACH	1.000	0.0000517
ii	10mm Dia	EACH	1.000	0.00006531
iii	12mm Dia	EACH	1.000	0.00007988
iv	14mm Dia	EACH	1.000	0.00010134
e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel:			
i	HST M8	EACH	1.000	0.00027087
ii	HST M10	EACH	1.000	0.00037594
iii	HST M12	EACH	1.000	0.00067915
iv	HST M16	EACH	1.000	0.0011871
v	HST M20	EACH	1.000	0.00208232
800	GROUTING			
	GROUTING: Grouting including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, roughening surface, cleaning, ramming, curing etc. at all level , drawings and as directed by engineer - in - charge for the following:(Cement shall be provided free of Cost for Cement sand Mortar as per TCC)			
801	Providing & grouting with cement slurry mix of approved ratio using pressure pump for water retaining concrete structures as per approved procedure including cost of nipples/ nozzles, cement, admixture, curing, pressure pumps, slurry agitator etc. all complete. Cost shall include fixing of nipples at maximum 500 mm centre to centre spacing, cutting of nipples after completing of grouting, making good of the nipple hole with appropriate non-shrink	SQM	50.000	0.04517483

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
	cement paste, water tightness test etc. all complete wherever specified in the drawing.			
806	Providing Chemical (epoxy) injection grouting with pressure pump for water retaining concrete structures conforming to IS:6494, including fixing nozzles, cost of approved chemical, admixture, curing etc. all complete as per NTPC Specification. Payment shall be made as per the consumption of chemical grout	Kg	5.000	0.00920162
900	DOORS, WINDOWS, VENTILATORS, LOUVERS			
	DOORS & WINDOWS: Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material (unless otherwise specified in BOQ/contract specification), equipments, transportation, handling, preparation of working drawings etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:			

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A903	Providing, fitting and fixing factory made pre-laminated solid core flush door shutter as per IS 2202 (Part 1 & Part 2) with pressed steel door frame, 35mm thick homogenous particle board bonded with BWP type phenolformaldehyde synthetic resin, particle board core conforming 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, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium color 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. (Finish painting paid separately)	SQM	14.000	0.10143413
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	7.600	0.10628847

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A906	Providing and fixing anodized hollow extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL/INDAL or equivalent make having minimum 2mm wall thickness as per IS:1285, IS:733 and anodized and electro color 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/toughened 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)	KG	60.000	0.03352337
A907	Providing and fixing fire proof steel doors (single or double shutter) with panic devices shall be 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers including all fittings, vision panel of minimum 11mm thick inter layered fire resistant glass , shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, TAC requirements and as per specification. Minimum ratings shall be 2 Hrs.	SQM	70.000	0.77085287

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
908	Providing and fixing steel windows/ventilator with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision including all fittings, metal beadings, hold fasts, shop and final painting ,glazing etc. all complete. (Glazing shall be paid separately)			
a	Openable type	SQM	1.000	0.00286171
b	fixed type	SQM	1.000	0.00183201
A909	Providing and fixing anodised aluminium work of INDAL, Jindal, Hindalco or other equivalent approved make for door frames, windows, ventilators, partitions, railing etc with extruded standard tubular and other sections(of minimum 2mm wall thickness) including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro color dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion 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.	Kg	680.000	0.47464616

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
911	Providing and fixing of door closers as per specification ,of approved make & quality all complete of following type :			
a	Over head hydraulic door closures as per IS 3564	EACH	1.000	0.00215755
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	500.000	0.098392
915	Providing, fixing and fitting of glazing of first grade class in line with IS 3548 in steel/aluminium/wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete.			
Ae	3mm thick Polycarbonate sheet fire retardant and ultra violet resistant with all complete as per IS 14434 and specifications.	SQM	1.000	0.00193319
Ah	6 mm thick clear toughened glass	SQM	30.000	0.07274478
i	Two nos. 6 mm thick clear toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)	SQM	7.300	0.0303782
918	Providing and fixing steel louvered window with ISMC 100 frame all round including verticals with 18G pressed steel louvers, painting etc. all complete.	SQM	1.000	0.00351701

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A923	Providing and fixing anodised aluminium grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodic coating of grade AC 15) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P. brass/ stainless steel screws @ 200 mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminium standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).	KG	250.000	0.15198683
1000	BRICKWORK			
	BRICKWORK: 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: (Cement shall be provided free of Cost for Cement Mortar as per TCC)			
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.			
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm ² (including cost of cement for brick making)	CUM	175.000	1.16419123
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,			

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
	scaffolding etc complete excluding plastering and painting.			
a	Using table moulded/machine made, uniform sized fly ash lime bricks confirming to IS 12894 with minimum crushing strength of 75 kg/cm ² (including cost of cement for brick making).	CUM	35.000	0.30170944
A1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 345mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
d	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm ² (including cost of cement for brick making)	CUM	1.000	0.01029045
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.			
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm ² (including cost of cement for brick making)	SQM	50.000	0.05312011
1005	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	20.000	0.03893719

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A1006	Providing and encasing of structural steel member with masonry work around flanges, webs etc. and filling the gap between steel and masonry by minimum 12mm thick mortar of 1:6 or or 1: 2: 4 concrete. Encased member shall be wrapped with galvanised chicken wire mesh of 0.9mm thickness, with 50mm lap etc. complete as per specification. (Chicken wire mesh to paid separately)	CUM	1.000	0.00736249
1007	Providing and laying 75 mm thick bed of dry brick aggregate including of excavation, disposal of surplus earth spreading of earth, ramming, watering etc. complete in all respects as directed by the engineer.	SQM	5.000	0.00103988
1008	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar 1:6 etc. complete.	CUM	10.000	0.021741
1009	Supply and placing in position mild steel wire fabric of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in concrete including cutting, bending, fixing etc. complete.	SQM	10.000	0.0028502
1010	Filling existing brick wall/ partition wall opening at all level including making good the broken edges/surface with cement mortar 1:6, painting, finishing to match with existing finishing, scaffolding/supporting at all level, removal of debris up to a lead of 1 km including loading, unloading, transportation etc. all complete.	SQM	100.000	0.10701468
1011	Providing and filling brick bats in soak pits all complete.	CUM	5.000	0.00687867
1200	CEMENT MORTAR PLASTER			

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
	PLASTERING: 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: (Cement shall be provided free of Cost as per TCC)			
A1201	Providing 18mm thick plaster consisting first (base) layer of 12mm thick plaster in cement sand mortar 1:6 and second (finish) layer of 6mm thick plaster in cement sand mortar 1:4 including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete as per specification.	SQM	250.000	0.10719455
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	200.000	0.0709968
A1202	Providing all external / internal RCC surfaces including RCC parapet walls shall be provided with minimum 12mm thick plaster in cement sand mortar (1:4) except walls of underground structures like cable trenches / valve pits etc.	SQM	300.000	0.10487496
1204	Providing 6mm thick plaster on ceiling in cement mortar 1:4 finished to a smooth all complete.	SQM	70.000	0.01549199
1205	Providing 12mm thick plaster in walls, drains/culverts with a paste of neat cement @ 1kg/sqm and rubbed smooth with trowel etc. all complete.	SQM	10.000	0.00150224
1207	Forming groove of uniform size from 12X12 mm up to 25X15 mm in plastered surface as per approved pattern, using wooden battens nailed to the under layer, including removal of wooden battons, repair of the edges of plaster panel and finishing the groove etc. complete as per specification, drawing and the instructions of engineer in	RM	20.000	0.00083762

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
	charge.			
A1210	Providing drip course in cement mortar (1:4) in parapet, chajjas, window/door heads, architectural facias, fins etc. all complete.	RM	10.000	0.0003544
1300	FINISHES TO CONCRETE / PLASTERED SURFACES			
	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:			
1301	Two or more coats of white wash/ colour wash as per IS 627 of approved brand and manufacture to give an even shade including a priming coat as per specifications.	SQM	100.000	0.0041358
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 complete as per NTPC Specification.	SQM	4700.000	0.59616538
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 and complete as per NTPC Specification.	SQM	382.000	0.06434109

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
1308	Providing and applying 2 or more coats of Chlorinated Rubber paint of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, providing and applying chlorinated rubber zinc phosphate primer confirming to IS 158 complete all as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level, inclusive of intermediate coat of Titanium dioxide / micaceous iron oxide complete as per specifications.	SQM	10.000	0.0023031
1309	Two or more coats of fire resistant transparent paint (@3.5 litre per sqm per coat) as per IS 162 on all woodwork over French polish as per IS 348 or flat oil paint as per IS 1237 of approved grade and manufacture to give an even shade as per specifications. French polish payment will be made separately.	SQM	15.000	0.00763593
1316	Providing and applying 2 mm thick plaster of Paris punning on walls including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	5.000	0.00056732
1317	Providing and applying 2 mm thick white cement punning on walls including preparation of surface, staging, etc to achieve a smooth even surface all complete as per specification and as directed by engineer.	SQM	10.000	0.00109248
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	50.000	0.00564487

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A1319	Providing and applying two or more coats of Acrylic smooth exterior paint with silicon additives of approved brand and manufacture and required shade over suitable primer 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	4000.000	0.65407161
1400	FLOORING AND SKIRTING			
	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:			
A1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron paricles in flooring. Under layer of 38mm thick M20 grade cement concrete mix (with stone chips of size 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 in line with specifications. (Quoted item rate shall be inclusive of providing glass joint strips) (Cement shall be provided free of	SQM	16500.000	11.01552818

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter-XI Schedule of items Quantities and Factor for deriving
Item Rate from the accepted Lump-sum Price

ST NO	Item Description	UNIT	Qty	Weightage
	Cost as per TCC)			
1402	Providing and laying 25 mm thick heavy duty cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates) flooring with metallic hardener pigmented topping of 10 mm thick uniform graded treated iron particles in skirting and dado. Under layer of 15mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5 mm well graded) and top layer of 10mm 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 as per specification. (Quoted item rate shall be inclusive of providing glass joint strips).(Cement shall be provided free of Cost as per TCC)	SQM	2.000	0.00116725

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
1412	Providing and laying 18-20mm thick polished Granite stone of approved color and texture in entrance area flooring, entrance steps, Entrance area staircases. Under bed shall average 30 mm thick of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level. The granite stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with adhesive chemicals for fine joint preparation and finished with pigments/chemicals of same colour as granite stone, curing, grinding, granite polishing etc. all complete.(Cement shall be provided free of cost for Cement sand mortar only as per TCC)	SQM	10.000	0.0401041
A1416	Providing and laying mirror polished vitrified ceramic tiles of size 600x600 from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 minimum 18mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3Kg/sqm , 3 mm groove joint pointed neatly with 3x4mm stainless epoxy grout SP-100 of laticrete or approved equivalent etc. all complete for following(Cement shall be provided free of cost for Cement sand mortar only as per TCC)			
a	10mm thick mirror polished Vitrified ceramic tiles In flooring of size 600mmx600mm	SQM	21.000	0.0333187
b	10mm thick matt finish vitrified ceramic tiles of size 600mmx600mm	SQM	41.000	0.06775053
c	7 mm thick dado with Designer ceramic tiles for Toilet, Pantry / Kitchen areas of size 300mmx450mm	SQM	120.000	0.1574075
d	7 mm thick Heavy duty (grade-5) dust pressed ceramic tiles of size 300mmx300mm	SQM	1.000	0.00140121

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A1419	Providing and laying granite stone slab of 18mm thickness single piece for wash basin / sink slab / facia of black or approved colour with cutting, making corners, moulding and opening etc. all complete.(Cement shall be provided free of cost for Cement sand mortar only as per TCC)	SQM	5.000	0.03276722
A1421	Providing and laying Heavy Duty dust pressed (grade-5) Ceramic Tiles (Matt Finish) of size 300x300mm(approved size) and 7mm thick of reputed / approved manufacturer (Kajaria,jhonson,Spartek or equivalent) of approved finish, shade and colour. The tiles shall be scratch resistance of minimum 5 on Mohr's scale and shall have a bending strength of 350 Kg./sqm,with Under bed shall average 43mm thk of 1 cement : 2 sand : 4 stone aggregates by volume and brought to proper level including cement mortar with neat cement slurry @3.3kg/sqm all complete.(Cement shall be provided free of cost for Cement sand mortar only as per TCC)	SQM	41.000	0.05931191
A1422	Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles confirming to IS:4457 in flooring/Dado and shall be laid over bitumastic lining of min.12mm thick (to be laid in layers of 6mm each). The tiles shall be applied with 6mm thick Potassium Silicate bedding mortar as per IS:4441, 4443 & 4832, 6mm thick pointing of joints of tiles with acid/alkali resistant epoxy/furane mortar up to a depth of 20mm and bituminastic end sealing and including preparation of surface, application of bitumen primer, curing etc. all complete as per specification. The tiles should be abrasion resistant & durable.			
a	12 mm thick Acid / Alkali resistant (Chemical resistant) tiles in dado	SQM	5.000	0.01171823

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
b	20 mm thick Acid / Alkali resistant (Chemical resistant) tiles in flooring	SQM	5.000	0.01562431
1500	ROOFING / SIDE CLADDING			
	ROOFING / SIDE CLADDING: Roofing / side cladding work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:			
ISG 1520	Providing & fixing permanently at all heights and elevations, troughed sheets over roof purlins/beams/side runners etc for roofing and side cladding (internal & external) including all labour, material, equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at any level as per specification, drawings and as directed by engineer - in - charge. Quoted rate shall include cost of all labour, material, tools and plants, consumables, lead, lift etc complete. Fixing fire resistant and UV resistant polycarbonate translucent sheets of minimum 3MM thickness on roof & side cladding as per the specification and approved drawings and directions of engineer in charge	SQM	5.000	0.01194625
1600	FALSE CEILING			
	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:			

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A1602	Providing, fixing and laying light weight mineral fibre tile false ceiling of minimum thickness 15 mm and exposed surface semi-perforated with depth of perforation as 4 mm and humid resistance of 95% RH and fire performance of class 0/1 as per BS 476 with metal suspension grid system with galvanized Tees of section 24 X 38 mm for main runners of approved colour and make as per specification including 50mm thick mineral wool insulation (density 48kg/cum) as per IS:8183 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. A.C. ducts etc. suitable M.S. channel (minimum MC 75 @ 1.2m) grid shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. complete with cut-outs etc. The size of tiles shall be 600 X 600 mm Required MS channel shall be measured & paid extra under respective item unit rate.	SQM	32.000	0.06857352
1700	RAIN WATER DOWN TAKE PIPES			
	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:			

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A1704	Providing and fixing galvanised MS down take pipes conforming to IS: 1239/IS: 3589 of 150 mm dia- Medium quality as per IS:1239(part-I) all complete as per specification. (Galvanising shall be as per IS: 4736. The minimum mass of zinc coating shall not be less than 400 gms/sq.m. as per IS:6745. The zinc coating shall be smooth and shall be subjected to testing as per IS: 2633, for uniformity of coating. The zinc coating shall be free from all defects as per IS: 2629. All rain water down comers shall be provided with roof drain heads and complete with shoes bends, junctions, sockets, adapters, brackets and finished with anticorrosive painting over a coat or primer. Downcomers shall be provided with 45 x 45 cm size Khurras having minimum thickness of 30 mm with M-20 concrete over PVC sheet of 1mx1mx400micron and finished with 12 mm thick cement sand plaster 1:3.The rainwater down comers shall be provided with suitable C.I. grating at inlet point etc. all complete as specification.(Cement shall beprovided free of Cost as per TCC)	RM	95.000	0.18885389
1800	MISCELLANEOUS WORKS			
	MISCELLANEOUS: 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:			

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A1801	Providing and Filling in trenches, plinths area paving and other underground structures with graded stone aggregate of size range 63 mm and down aggregates (complying IRC specification) in layers as specified below. Compacted thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum/non-expansive soil/sand and compacting to 85 % 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.			
a)	With 200 mm compacted thickness of the underbed stone soling for normal Paving	CUM	2250.000	5.61549546
b)	400 mm compacted thickness of the underbed stone soling for Heavy Duty Pavement	CUM	1620.000	4.04315673
1802	Supply and laying approved quality Stone aggregate 40mm size in transformer yards.	CUM	10.000	0.03685006
1804	Providing and fixing weep holes in Retaining wall, drains, etc consisting of 100 mm dia HDPE pipe sleeves with single side covering for the pipe mouth with galvanised welded wire fabric of 20 mm sq. opening all complete.	EACH	10.000	0.00286328
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. Earthing mats/rods shall be supplied by BHEL free of cost)	MT	20.000	0.33400149
1809	Construction of below ground earthing system test pits as per drawing / sketches including concreting, reinforcement, formwork, providing & fixing GI strip etc as per drawing and specification (excavation & backfilling only will be paid under	EACH	10.000	0.12501631

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
	applicable BOQ items).			
1813	Providing Earthing pit as per drawing with charcoal & salt, GI pipes, GI earth electrodes, GI wire, GI strips, brick chamber with covers including associated earthwork etc. all complete.	EACH	12.000	0.44210463
1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc. all complete.	Kg	100.000	0.01311739
1823	Providing and laying cinder filling in the toilets, roads,etc complete as directed by engineer in charge.	CUM	10.000	0.01970897
1824	Disposal of scrap steel, scrap wood, broken packing crates, cable scrap, debris and other civil waste, electrical waste materials etc. from project site to a designated place within 5 KM range, with all manpower T & P etc. including loading and unloading as and when directed by BHEL.			
a	Steel scrap / metal scrap	MT	10.000	0.00703115
b	Debris & Other waste materials.	CUM	1500.000	0.19924004
A1841	Supply & packing uniformly downgraded 40mm size gravel at all depth in the pit/well dug for rain water harvesting.	Cum	5.000	0.01685344
A1844	Supply and fixing of bar screen of 5 mm square M. S. bar at inlet point of Rain water collecting tanks with 50 mm X 50 mm opening etc all complete	SQM	25.000	0.00330863
A1846	Providing & fixing 150 dia PVC pipe ISI mark 6 Kg/cm2 as per specification.	RM	50.000	0.03954459
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			

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
	by engineer - in - charge for the following:			
2001	Supplying and erecting in position 2.4 m high PVC coated gavanised 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 confirming 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.	RM	90.000	0.26642745
A2008	Supply, fabrication and fixing of pre-cast RCC of minimum M20 grade 3M HIGH (250X200MM) FENCE POST including making arrangements for fixing of chain link fencing (covered in item no. 2001 above), painting etc. all complete as per specification. All corner posts will have two stay posts and every tenth post will have transverse stay post. (Cement shall not be provided for Pre Cast RCC)	EACH	5.000	0.00538706
A2009	Supply, fabrication and installing in position and testing MSSTEEL Gates, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffners, bracings, fabricated hinges, Aldrops with locking arrangement, tempered steel pivot, guide track Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete as per specification.	MT	2.500	0.28414037

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
2100	WATER SUPPLY			
	WATER SUPPLY: Water supply work including men, 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:			
2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck bib cocks including sockets, union, nuts etc all complete - 15mm nominal bore.	EACH	8.000	0.00834247
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	EACH	15.000	0.01390094
2103	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality including all specials etc all complete for following sizes:			
a	25mm nominal bore.	EACH	6.000	0.00625685
b	50mm nominal bore.	EACH	5.000	0.00753088
2104	Providing and fixing GI pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete for internal works with GI sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc all complete for following sizes:			
a	15 mm nominal bore.	RM	30.000	0.01540336
b	20 mm nominal bore.	RM	10.000	0.00560275
c	25 mm nominal bore.	RM	20.000	0.01316729
d	50 mm nominal bore.	RM	15.000	0.01307355
2105	Providing and fixing GI pipes class B complete for external work with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete for following sizes:			
a	15 mm nominal bore.	RM	25.000	0.00961025

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
b	20 mm nominal bore.	RM	10.000	0.00431055
c	25 mm nominal bore.	RM	90.000	0.04760182
d	50 mm nominal bore.	RM	55.000	0.04081648
A2106	Providing and fixing wall to wall mirror of height 900mm & 6 mm thk float glass from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws etc all complete.	EACH	4.000	0.00730305
A2108	Providing and fixing 20 mm diameter stainless steel towel rails (600mm X 20mm) all complete.	EACH	2.000	0.00247536
2110	Providing and fixing stainless steel Soap holder mounted with C.P. screws etc all complete.	EACH	4.000	0.00344226
2111	Providing and fixing stainless steel / C.P. liquid soap dispenser. Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc all complete.	EACH	4.000	0.0027418
2112	Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. sll complete.	EACH	4.000	0.00323543
2113	Providing and fixing chromium plated brass shower rose 100mm dia with 15 or 20 mm inlet dia all complete.	EACH	4.000	0.00301234
A2114	Providing & fixing in position High density polyethylene (cylindrical/vertical) molded seamless type tank of Syntex or approved equivalent including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete for following capacities. GI pipes shall be paid separately under ST No. 2105.			
a	500 litres capacity	EACH	2.000	0.01255913
2119	Providing and fixing Recessed porcelain soap tray in shower area etc all complete.	EACH	4.000	0.00154242
2200	SANITARY WORKS			

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
	SANITARY: Sanitary work 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: (Cement shall be provided free of Cost for Mortar only as per TCC)			
A2201	Supply and fixing glazed vitreous china Wash Basin of (oval shape) approved make (with photovoltaic control) conforming to IS:2556 part 4 of oval shape with R.S. or C.I. brackets painted white, 15mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug, 32mm chromium plated brass bottle trap and waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, fittings, cutting and making good the walls where required etc all complete.			
a	White	EACH	2.000	0.02624561
b	Colored	EACH	2.000	0.03051519
A2204	Providing and fixing colour glazed vitreous china European type water closet conforming to IS:2556 with siphon, open front solid plastic seat, flush valve and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, necessary C.P connections etc all complete.			
b	Wall mounted	EACH	2.000	0.03478086
2205	Providing and fixing colour glazed vitreous indian type Orissa pattern (580x440mm) water closet conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, necessary C.P connections etc all complete.	EACH	1.000	0.00858929

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A2206	Providing and fixing white flat back glazed vitreous china lipped urinals of size 440x265x355 mm with photo voltaic control flushing system as per IS:2556 (part 6, section 1) with flush pipes, lead pipes, gratings, traps and necessary C.P. fittings, with provision of squatting urinal for ladies toilet etc. all complete.	EACH	4.000	0.09855468
2207	Supply, laying and jointing UPVC pipes of class 3 as per IS:4985 including bends, branches and all other necessary fittings, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete for following.			
a	75mm dia pipes	RM	65.000	0.02890345
b	110mm dia pipes	RM	65.000	0.04561113
c	160mm dia pipes	RM	25.000	0.02422823
d	200mm dia pipes	RM	25.000	0.03514251
A2207	Supply, laying and jointing CPVC pipes as per IS:15778 including bends, branches and all other necessary fittings, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete for following.			
a	75mm dia pipes	RM	20.000	0.0063666
b	110mm dia pipes	RM	30.000	0.01362195
c	160mm dia pipes	RM	20.000	0.01240197
d	200mm dia pipes	RM	20.000	0.01506572
2208	Providing, laying light duty non pressure NP3 class RCC pipes as per IS: 458 with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following.			
a	200mm dia	RM	201.000	0.25857329
b	300mm dia	RM	290.000	0.5980833
c	450mm dia	RM	31.000	0.08139433
d	600mm dia	RM	30.000	0.09644904
e	900mm Dia	RM	20.000	0.08687908

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
2209	Providing, laying light duty non pressure NP2 class RCC pipes as per IS: 458 with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following.			
a	150mm dia	RM	96.000	0.09486105
b	250mm dia	RM	17.000	0.02174658
c	300mm dia	RM	12.000	0.0172217
d	450mm dia	RM	12.000	0.02412716
e	500mm dia	RM	10.000	0.0236312
2210	Providing, laying light duty non pressure NP4 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following:			
a	450mm dia	RM	10.000	0.03006182
2211	Providing and fixing C.I Manhole heavy duty cover of size 600mmx450mm including frame from reputed manufacture etc. all complete.	EACH	10.000	0.17121672
2212	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	10.000	0.17191817
2213	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber(Clay Brickwork in 1:6 mortar, 12mm plaster in 1:6 mortar & 1:2:4 Cement Concrete) and water tight CI cover with 300x300mm (inside). The weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg etc all complete for following sizes:			
a	100x100mm P or S Type.	EACH	4.000	0.00980645
b	150x100mm P or S Type.	EACH	4.000	0.01070195
c	150x150mm P or S Type.	EACH	4.000	0.01213438
2214	Providing and fixing C.I. floor traps size 100 mm Inlet and 100 mm Outlet Sand Cast Iron S&S as per IS: 1729 with C.P jalli all complete.	EACH	20.000	0.04812058

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
2215	Providing and fixing 100mm heavy duty UPVC floor traps with 100 mm inlet and 100 mm outlet & C.P jalli all complete.	EACH	20.000	0.0320623
2218	Providing and fixing white vitreous urinal partitions of size 675x325x85mm all complete.	EACH	1.000	0.00601444
2219	Providing and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS: 10592) all complete as per specification.	EACH	1.000	0.02074394
2221	Providing, laying spun CI pipes with conforming to IS 1536 complete for following. (Excavation, backfilling, concrete to be paid separately)			
c	150mm dia	RM	85.000	0.23960193
d	200mm dia	RM	120.000	0.48616586
2400	ROAD WORKS			
	ROAD WORKS: Road works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation etc. as per specification drawing, relevant IRC & IS codes and as directed by the Engineer-in-charge for the following:			
2401	Preparation of sub grade by excavating earth to required depth for all types of soil/rock , dressing to camber and consolidating the base including making good the undulation etc and disposal of surplus earth within a lead upto 1 km etc. all complete.	CUM	200.000	0.0134843
2403	Providing, stacking & laying granular morrum for shoulder including watering, compaction with road roller to required camber etc all complete.	CUM	50.000	0.05358024
2405	Providing & laying water bound macadam base course in layers of required thickness with stone aggregate 63mm to 40mm size(IRC 19 - grading -1) , stone screening and blinding material including screening sorting, spreading to template and consolidation with road roller including	CUM	50.000	0.11212106

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter-XI Schedule of items Quantities and Factor for deriving
Item Rate from the accepted Lump-sum Price

ST NO	Item Description	UNIT	Qty	Weightage
	carriage, spreading and consolidation of blinding material moorum etc all complete.			
2413	Supplying and laying 400mmx150mmx350mm deep precast concrete kerb stone of grade M-20 with 20 mm nominal size stone aggregate and of shape as per detailed drawing including fixing with cement mortar (1:2) in 13mm thick joints, finishing of joints with neat cement paste, making drainage opening where required etc all complete. .(Cement shall be provided free of Cost for Cement mortar only as per TCC)	RM	400.000	0.28897226
A2414	Supply and laying 200 mm dia R.C.C NP-3 type Hume pipe in raised shoulders as rain water drains as per detailed drawing including fixing with cement mortar (1:2) in 13mm thick joints, finishing of joints with neat cement paste etc all complete.. (Cement shall be provided free of Cost for Cement mortar only as per TCC)	RM	50.000	0.0643311
B2414	Supply and laying 600 mm dia R.C.C NP-3 type Hume pipe in raised shoulders as rain water drains as per detailed drawing including fixing with cement mortar (1:2) in 13mm thick joints, finishing of joints with neat cement paste etc all complete.. (Cement shall be provided free of Cost for Cement mortar only as per TCC)	RM	30.000	0.09229653

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A2415	Supply and laying 150mm dia R.C.C NP-3 as per IS: 458 type Hume pipe in raised shoulders as rain water drains as per detailed drawing including fixing with cement mortar (1:3) in 13mm thick joints, finishing of joints with neat cement paste etc all complete. Payment terms - a) On receipt of materials at site - 50%; b) On completion of erection & fixing - 50%.	RM	50.000	0.02796891
2416	Dismantling of existing road consisting of premix carpet, kerb stone/ brick on edge, bitumen macadem course, WBM, preparing subgrade to receive new WBM including camber consolidation including disposal of debris within a lead of 1 km etc all complete.	SQM	300.000	0.03861358
	CONCRETE WORKS IN ROADS:			
	Providing and placing concrete work in road 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:			
A2418	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/roads at any depth below finished floor level etc. The road base shall be with minimum 150 mm thick dry lean concrete over granular sub base. Dry lean concrete shall be laid by a mechanical paver and compacted by vibratory rollers. (Cement shall be provided free of Cost as per TCC)	CUM	1.000	0.00435001

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
A2419	Providing and laying (using fully mechanised paver) cement concrete of grade M35 using 20 mm nominal size stone aggregate with approved admixture (if required), provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing for work etc. all complete. (Excluding the cost of reinforcement and dowel bar) (Cement shall be provided free of Cost as per TCC)	CUM	1.000	0.00421338
A2420	Supplying and filling sand for preparation of road sub-base/ sub-grade in layers not exceeding 300 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	25.000	0.05840011
A2421	Providing & laying dry lean cement concrete of grade M15 with 20 mm nominal size graded stone aggregate over a prepared sub-grade including compaction, finishing, curing etc all complete. The road base shall be with minimum 150 mm thick dry lean concrete over granular sub base. Dry lean concrete shall be laid by a mechanical paver and compacted by vibratory rollers. (Cement shall be provided free of Cost as per TCC)	CUM	1.000	0.00383387
A2423	Providing and fixing separation Membrane of impermeable plastic sheeting of 125 microns thick laid flat without creases etc. all complete	SQM	100.000	0.00157691
	MISCELLANEOUS IN ROAD WORKS:			
2428	Providing & installation of bitumen impregnated fibre board of specified thickness confirming to IS 1838 as joint filler including nailing, coating of both faces with coal tar pitch/bitumen etc. all complete as per specification, drawing and as directed by engineer.	RM	250.000	0.25526041

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter-XI Schedule of items Quantities and Factor for deriving
Item Rate from the accepted Lump-sum Price

ST NO	Item Description	UNIT	Qty	Weightage
2429	Providing and filling in position hot applied bitumen sealing compound (Grade A) of specified thick confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints, sealant primer etc all complete as per specification, drawing and as directed by Engineer.	RM	500.000	0.03536336
A2431	Providing with interlocking concrete blocks of minimum M35 grade and minimum 80 mm thickness underlain by 20mm thick layer of sand followed by 200mm thick 63 mm and down aggregate with interstices filled with selected moorum/ non-expansive soil The interlocking concrete blocks shall be of approved colour and pattern as per specification, drawing and as directed by Engineer. (Payment for 20 mm Sand layer and 200mm thick 63 mm and down aggregate with interstices filled with selected moorum/ non-expansive soil shall be made separately under item no A2432 and A 1801 respectively) (Cement shall not be provided by BHEL for this item)	SQM	600.000	0.63832872
A2432	Providing and laying sand layer in line with NTPC specifications below concrete pavers including compaction etc all complete as per specification, drawing and as directed by Engineer.	SQM	600.000	0.02944638
Sub-Total Weightage for Ramagundam FGD				99.68357681
Items for 2x800MW NTPC Telangana TPP, Ramagundam				
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	SQM	20.510	0.28683902

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

ST NO	Item Description	UNIT	Qty	Weightage
	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.			
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	150.338	0.02958417
Sub-Total Weightage for 2x800 MW Telangana TPP				0.31642319
Grand Total Weightage				100