

TENDER SPECIFICATION

NO: BHE/PW/PUR/HONGI-CVL/1532

JOB: Civil, structural & Architectural Works Comprising of Foundations for GTG, HRSG, Stack, HRSG Chimney, Fans, Pipes & Cable Racks & Other Equipment Foundations, Trenches, Tanks, GTG Hall, Control and Switchgear Rooms with Auxiliary Plant Buildings, Balance of Plant (BOP), CW Pump House, Feed Pool, Paving, Roads, Drains, Culverts, Sewage Systems, Electrical Earthing and other Misc Foundations etc including RCC Bored Cast In Situ piling at **Combined Cycle Captive Power Plant, ONGC Hazira Site, Gujarat**

TECHNICAL BID SPECIFICATION - VOLUME- I

TENDER SPECIFICATIONS CONSISTS OF:

- **Notice Inviting Tender**
- **Volume 1 A - Technical Conditions of Contract,**
- **Volume 1 B - Special conditions of Contract,**
- **Volume 1 C - General conditions of Contract**
- **Volume 1 D - Forms & Procedures**
- **Volume 1 E- Technical Specifications & Drawings**



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

Volume No	Description	Hosted in Website bhel.com as files Titled
NIL	Tender Specification Issue Details	(Part of Vol-IA-1532)
NIL	Notice Inviting Tender	(Part of Vol-IA-1532)
I-A	Technical Conditions of Contract	Vol-IA-1532
I-B	Special Conditions of Contract	Vol-IBCD-1532
I-C	General Conditions of Contract	(Part of Vol-IBCD-1532)
I-D	Forms & Procedures	(Part of Vol-IBCD-1532)
I-E	Technical Specifications & Drawings	Vol-I-E-1532
II	Price Bid Specification	Vol-II-1532

TENDER SPECIFICATION

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EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

LAST DATE FOR
TENDER SUBMISSION: Refer Notice Inviting Tender

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

M/s.
.....

PLEASE NOTE:
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

AGM (Purchase)
Place: Nagpur
Date:

1532

NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



BHEL PSWR**Notice Inviting Tender****Tender Specification No : BHE/PW/PUR/HONGI-CVL/1532****Page 5 of 90****Ref: BHE/PW/PUR/HONGI-CVL/1532****Date: 09/09/2015****NOTICE INVITING TENDER (NIT)****NOTE: BIDDER MAY DOWNLOAD FROM WEB SITES****OR****PURCHASE TENDERS FROM THIS OFFICE ALSO**

To

Dear Sir/Madam

Sub: NOTICE INVITING TENDER

Sealed offers in two part bid system are invited from reputed & experienced bidders (meeting [PRE QUALIFICATION CRITERIA](#) as mentioned in Annexure-I) 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

SL NO	ISSUE	DESCRIPTION	
i	TENDER NUMBER	BHE/PW/PUR/HONGI-CVL/1532	
ii	Broad Scope of job	Civil, structural & Architectural Works Comprising of Foundations for GTG, HRSG, Stack, HRSG Chimney, Fans, Pipes & Cable Racks & Other Equipment Foundations, Trenches, Tanks, GTG Hall, Control and Switchgear Rooms with Auxiliary Plant Buildings, Balance of Plant (BOP), CW Pump House, Feed Pool, Paving, Roads, Drains, Culverts, Sewage Systems, Electrical Earthing and other Misc Foundations etc including RCC Bored Cast In Situ piling at Combined Cycle Captive Power Plant, ONGC Hazira Site, Gujarat	
iii	DETAILS OF TENDER DOCUMENT		
a	Volume-IA	<i>Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc</i>	<i>Applicable</i>
b	Volume-IB	<i>Special Conditions of Contract (SCC)</i>	<i>Applicable</i>
c	Volume-IC	<i>General Conditions of Contract (GCC)</i>	<i>Applicable</i>
d	Volume-ID & IE	<i>Forms and Procedures, Specifications etc</i>	<i>Applicable</i>
e	Volume-II	<i>Price Schedule (Absolute value).</i>	<i>Applicable</i>

BHEL PSWR**Notice Inviting Tender****Tender Specification No : BHE/PW/PUR/HONGI-CVL/1532****Page 6 of 90**

iv	Issue of Tender Documents	<p>1. <u>Sale from BHEL PS Regional office at :</u> Start : 09/09/2015 , Closes: 18/09/2015 , Time : 16.00 Hrs</p> <p>2. From BHEL website (www.bhel.com) Tender documents will be available for downloading from website till due date of submission</p>	<i>Applicable</i>
v	DUE DATE & TIME OF OFFER SUBMISSION	<p><u>Date : 19/09/2015, Time 15.00 Hrs</u> <u>Place : BHEL PS Regional office at :Nagpur</u></p> <p>Tenders being submitted through representative shall be submitted at dispatch section of PSWR HQ Office after making entry/registration at the reception. For any assistance on the matter kindly contact following officials:</p> <ul style="list-style-type: none"> • Pratish Gee Varghese / Sr Engineer (Purchase) • Neeraj Tiwari / Sr Engineer (Purchase) • Shivkesh Meena / Engineer (Purchase) 	<i>Applicable</i>
vi	OPENING OF TENDER	<p><i>1 hours after the latest due date and time of Offer submission</i></p> <p><i>Notes:</i> (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</p>	<i>Applicable</i>
vii	EMD AMOUNT	<i>Rs 2,00,000/- (Rupees Two Lakhs Only)</i>	<i>Applicable</i>
viii	COST OF TENDER	<i>Rs 2000/- (Rupees Two Thousand Only)</i>	<i>Applicable</i>
ix	LAST DATE FOR SEEKING CLARIFICATION	<p><i>Five days before the due date of offer submission.</i> Along with soft version also, addressing to undersigned & to others as per contact address given below</p>	<i>Applicable</i>

x	SCHEDULE OF Pre Bid Discussion (PBD)		<i>Not Applicable.</i>
xi	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)	Mrs. Pravin Tripathi, IA & AS (Retd.) D-243, Anupam Gardens, Lane IB, Neb Sarai, Sainik Farms, New Delhi – 110 068 Email: pravin.tripathi@gmail.com	<i>Applicable</i>
xii	Latest updates	<u>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) and not in the newspapers. Bidders to keep themselves updated with all such information</u>	

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 & stamped on each page, as part of offer. Rates/Price including discounts/rebates, if any, mentioned anywhere/in any form in the techno-commercial offer other than the Price Bid, shall not be entertained.

3.0 Unless specifically stated otherwise, bidder shall remit cost of tender and courier charges if applicable, in the form of Demand Draft drawn in favour of Bharat Heavy Electricals Ltd, payable at Power Sector Regional HQ at Nagpur issuing the Tender, along with techno-commercial offer. Bidder may also choose to deposit the Tender document cost by cash at the Cash Office as stated above against sl no iv of 1, on any working day; and in such case copy of Cash receipt is to be enclosed with the Techno Commercial offer. Sale of tender Documents shall not take place on National Holidays, holidays declared by Central or State Governments and BHEL PS HQ at Nagpur, Sundays and second/ last Saturdays

4.0 Unless specifically stated otherwise, bidder shall deposit EMD through Demand Draft/Pay Order in favour of Bharat Heavy Electricals Ltd,

payable at Nagpur. For other details and for 'One Time EMD' please refer General Conditions of Contract.

5.0 **Procedure for Submission of Tenders:** 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/COST of TENDER)' in two separate sealed and super scribed envelopes (ENVELOPE-I & ENVELOPE-II)
- PART-II (Price Bid) - in sealed and super scribed envelope (ENVELOPE-III)
- One set of tender documents shall be retained by the bidder for their reference

6.0 The contents for ENVELOPES and the superscription for each sealed cover/Envelope are as given below. **(All pages to be signed and stamped)**

Sl no	Description	Remarks
	Part-I A	
	<p>ENVELOPE – I super scribed as : PART-I (TECHNO COMMERCIAL BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:</p> <p>CONTAINING THE FOLLOWING:-</p>	
i.	Covering letter/Offer forwarding letter of Tenderer.	
ii.	<p>Duly filled-in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above.</p> <p>Note:</p> <p>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.</p> <p>b. BHEL reserves the right to accept/reject the deviations without assigning any reasons, and BHEL decision is final and binding.</p> <p>i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL</p> <p>ii). In case of unacceptable deviations, BHEL</p>	

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	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 : <u>Technical</u> 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 super scribed as: PART-I (EMD/COST of TENDER) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:	
	CONTAINING THE FOLLOWING:-	
i.	1. Earnest Money Deposit (EMD) in the form as indicated in this Tender OR Documentary evidence for 'One Time EMD' with the Power Sector Region of BHEL floating the Tender 2. Cost of Tender (Demand Draft or copy of Cash Receipt	

as the case may be)

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

OUTER COVER	
	<u>ENVELOPE-IV</u> (MAIN ENVELOPE / OUTER ENVELOPE) Super scribed as: TECHNO-COMMERCIAL BID, PRICE BID & EMD TENDER NO: NAME OF WORK: PROJECT: DUE DATE OF SUBMISSION:
	CONTAINING THE FOLLOWING:
i	<ul style="list-style-type: none"> ○ Envelopes I ○ Envelopes II ○ Envelopes III

SPECIAL NOTE: All documents/ annexures submitted with the offer shall be properly annexed and placed in respective places of the offer as per enclosure list mentioned in the covering letter. BHEL shall not be responsible for any missing 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 'LOAD' wise and 'PERFORMANCE' wise as per the following:

I. **LOAD:** Load takes into consideration **ALL** the contracts of the Bidder under execution with BHEL Regions, irrespective of whether they are similar to the tendered scope or not. The 'Load' is the sum of the unit wise identified packages (refer Table-1) for contracts with BHEL Regions. The cut off month for reckoning 'Load' shall be the month, two (2) months preceding the month corresponding to the 'latest date of bid submission', in the following manner:

(Note: For example if latest bid submission is in Aug 2011, then the 'load' shall be calculated up to and inclusive of June 2011)

i). Total number of Packages

Total number of Packages in hand = P
Where

- 'P' is the sum of all unit wise identified packages under execution with BHEL Regions as of the cut off month defined above, including packages yet to be commenced, excepting packages which are on HOLD due to reasons not attributable to Bidder..

II. **PERFORMANCE:** Here 'Monthly Performance' of the bidder for all the packages (**under execution**/ executed during the 'Period of Assessment' in all the 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 the cut off month. The cut off month for reckoning 'Period of Assessment' shall be the month two (2) months preceding the month corresponding to the 'latest date of bid submission', in the following manner:

(Note: For example if 'latest date of bid submission' is in Aug 2011, then the 'performance' shall be assessed for a 6 month period up to and inclusive of June 2011, 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) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced. Total number of similar packages for all Regions = **P_T** (ie $P_T = P_1 + P_2 + P_3 + P_4 + \dots + P_N$)

Sl no	Item Description	Details for all Regions							Total
		(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
1	Similar Packages for all Regions → (under execution/ executed during period of assessment)	P_1	P_2	P_3	P_4	P_5	...	P_N	Total No of similar packages for all Regions = P_T ie Sum (Σ) of columns (iii) to (ix)
2	Number of Months for which ‘Monthly Performance Evaluation’ as per relevant formats should have been done in the ‘period of assessment for corresponding similar Package (as in row 1)	T_1	T_2	T_3	T_4	T_5	...	T_N	Sum (Σ) of columns (iii) to (ix) = T_T

3	Monthly performance scores for the corresponding period (as in Row 2)	S ₁₋₁ , S ₁₋₂ , S ₁₋₃ , S ₁₋₄ , S ₁₋₅ , S _{1-T1}	S ₂₋₁ , S ₂₋₂ , S ₂₋₃ , S ₂₋₄ , S ₂₋₅ , S _{2-T2}	S ₃₋₁ , S ₃₋₂ , S ₃₋₃ , S ₃₋₄ , S ₃₋₅ , S _{3-T3}	S ₄₋₁ , S ₄₋₂ , S ₄₋₃ , S ₄₋₄ , S ₄₋₅ , S _{4-T4}	S ₅₋₁ , S ₅₋₂ , S ₅₋₃ , S ₅₋₄ , S ₅₋₅ , S _{5-T5}	S _{N-1} , S _{N-2} , S _{N-3} , S _{N-4} , S _{N-5} , S _{N-TN}	-----
4	Sum of Monthly Performance scores of the corresponding Package for the corresponding period (as in row-3)	S ₁	S ₂	S ₃	S ₄	S ₅	...	S _N	Sum (Σ) of columns (iii) to (ix) = S_T

- 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-N}) 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-N}). 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 package 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

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

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

- a) Period of Assessment.
- b) 12 months preceding the cut-off month
- c) 24 months preceding the cut-off month
- d) 36 months preceding 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	NA
2	> 60 and ≤ 65	0.4
3	> 65 and ≤ 70	0.35
4	> 70 and ≤ 75	0.25
5	> 75 and < 80	0.2
6	≥ 80	NA

III. 'Assessment of Capacity of Bidder':

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

Max number of packages P_{Max}= (R_{BHEL}- 60) divided by corresponding value of 'L'

i.e. (R_{BHEL}- 60)/L

Note:

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

The Bidder shall be considered 'Qualified' as per 'Assessment of Capacity of Bidder' for the subject Tender if $P \leq P_{Max}$
(Where P is calculated as per clause 9.I)

IV. Explanatory note:

- a) Similar package means Boiler or ESP or Piping or Turbine or Civil or Structure or Electrical or CI, 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, CI, 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 (ie Boiler, ESP and Power Cycle Piping) and finally the Bidder's capacity to execute the tendered scope is assessed in line with III above
- b) Identified Packages (Unit wise)

Table-1

	Civil	Electrical & CI	Mechanical
	Enabling works Pile and Pile Caps Civil Works including foundations Structural Steel Fabrication & Erection Chimney Cooling Tower Others (Civil)	Electrical CI Others (Elect & CI)	Boiler & Aux (All types including CW Piping if applicable) Power Cycle Piping/Critical Piping LP Piping ESP Steam Turbine Generator set & Aux Gas Turbine Generator set & Aux Hydro Turbine Generator set & Aux Turbo Blower (including Steam Turbine) Material Handling

			Material Management Material Handling & Material Management Others (Mechanical)
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- c) Bidders who have not been evaluated for at least six package months in the last 36 months in the online BHEL system for contractor performance evaluation in BHEL PS Regions, w.e.f. July'2010 shall be considered "NEW VENDOR".

A 'NEW VENDOR' shall be considered qualified subject to satisfying all other tender conditions

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

The "FIRST TIMER" tag shall remain till execution of work for a period of not less than 09 months, from the commencement of work of first package

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

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

- d) In the unlikely event of all bidders shortlisted against Technical and Financial Qualification criteria not meeting the criteria on 'Assessment of Capacity of Bidders' detailed above, OR leads to a single tender response on applying the criteria of 'Assessment of Capacity of Bidders' or due to non-approval by Customer, then BHEL at its discretion reserves the right to consider the further processing of the Tender based on the **Overall Performance Rating R_{BHEL}** only, starting from the upper band.

- e) 'Under execution' shall mean works in progress as per the following:

- i. up to Boiler Steam Blowing in case of Steam Generator and Auxiliaries
- ii. Up to Synchronization in case of all other works excepting sl no (i) and (iii)

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- iii. Upto execution of at least 90% of anticipated contract value in case of Civil & Structures (unit wise), Enabling works and upto 90% of material unloading (in tonnage) as per the original contract in case of MM Package.

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

- f) Performance evaluation in CL 9 above is applicable to Prime bidder and consortium partner (or Technical tie up partner) for their respective scope of work

10.0 Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation, applicable wage structure, wage rules, etc before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions.

11.0 For any clarification on the tender document, the bidder may seek the same in writing or through e-mail, as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay or any other delays. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.

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

13.0 In the event of any conflict between requirement of any clause of this specification/ documents/drawings/data sheets etc or requirements of different codes/standards specified, the same to be brought to the knowledge of BHEL in writing for clarification before due date of seeking clarification (whichever is applicable), otherwise, interpretation by BHEL shall prevail. Any typing error/missing pages/ other clerical errors in the tender documents, noticed must be pointed out before pre-bid meeting/submission of offer; else BHEL's interpretation shall prevail.

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- 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.**
- 16.0 The Bidder has to satisfy the Pre-Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of satisfying the Pre-Qualification Criteria specified in this NIT as per Annexure-I (as applicable), past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD.
- 17.0** In case BHEL decides on a 'Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorized representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders.
- 18.0 Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise.
- 19.0 BHEL reserves the right to decide the successful bidder on the basis of Reverse Auction process. In such case all qualified bidders will be intimated regarding procedure/ modality for Reverse Auction process prior to Reverse Auction and price will be decided as per the rules for Reverse Auction. .
- However, if reverse auction process is unsuccessful as defined in the RA rules/procedures, or for whatsoever reason, then the sealed 'PRICE Bids' will be opened for deciding the successful bidder. BHEL's decision in this regard will be final and binding on bidder.
- 20.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
- 21.0 In case the bidder is an "Indian Agent of Foreign Principals", 'Agency agreement has to be submitted along with Bid, detailing the role of the agent along with the terms of payment for agency commission in INR,

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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 with a validity period of six months initially. In case the consortium is awarded the contract, then the Consortium Agreement between the Prime Bidder and Consortium Partner or partners shall be extended till contractual completion period including extension periods if any applicable.
- 23.2 'Standalone' bidder cannot become a 'Prime Bidder' or a 'Consortium bidder' or 'Technical Tie up bidder' in a consortium (or Technical Tie up) bidding. Prime bidder shall neither be a consortium partner to other prime bidder nor take any other consortium partners. However, consortium partner may enter into consortium agreement with other prime bidders. In case of non-compliance, consortium bids of such Prime bidders will be rejected.
- 23.3 Number of partners for a consortium Bidding (or Technical Tie up) shall be as specified in the PQR
- 23.4 Prime Bidder shall be as specified in the Pre-Qualification Requirement, else the bidder who has the major share of work.
- 23.5 In order to be qualified for the tender, Prime Bidder and Consortium partner or partners shall satisfy (i) the Technical 'Pre Qualifying Requirements' specified for the respective package, (ii) "Assessment of Capacity of Bidder" as specified in clause 9.0.
- 23.6 Prime Bidder shall comply with additional 'Technical' criteria of PQR as defined in 'Explanatory Notes for the PQR'
- 23.7 Prime Bidder shall comply with all other Pre Qualifying criteria for the Tender unless otherwise specified
- 23.8 In case customer approval is required, then Prime Bidder and Consortium Partner or partners shall have to be individually approved by Customer for being considered for the tender.

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- 23.9 Prime Bidder shall be responsible for the overall execution of the contract
 - 23.10 In case of award of job, Performance shall be evaluated for Prime Bidder and Consortium Partner or partners for their respective scope of work(s) as per prescribed formats
 - 23.11 In case the Consortium partner or partners back out, their SDs shall be encashed by BHEL. In such a case, other consortium partner or partners meeting the PQR have to be engaged by the Prime Bidder, and if not, the respective work will be withdrawn and executed on risk and cost basis of the Prime Bidder. The new consortium partner or partners shall submit fresh SDs as applicable.
 - 23.12 In case the prime Bidder withdraws, the whole contract shall be considered cancelled and short closed.
 - 23.13 After execution of work, the work experience shall be assigned to the Prime Bidder and the consortium partner or partners for their respective scope of work. After successful execution of two similar works with the same consortium partner or partners under direct orders of BHEL, the Prime Bidder shall be eligible for becoming a 'stand-alone' bidder for similar works, subject to certification from BHEL about the active involvement of the Prime Bidder for satisfactory execution of the works.
 - 23.14 The consortium partner shall submit SD equivalent to 2% of the total contract value in addition to the SD to be submitted by the prime Bidder for the total contract value. In case there are two consortium partners, then each partner shall submit SD equivalent to 1% of the total contract value in addition to the SD to be submitted by the prime Bidder for the total contract value.
 - 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 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 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/rules in respect of suspension of business dealings, 'Vendor evaluation format', 'Quality, Safety & HSE guidelines', etc may undergo change from time to time and the latest one shall be followed.

For BHARAT HEAVY ELECTRICALS LTD
AGM Purchase

Enclosure

01. Annexure-1: Pre Qualifying criteria.
02. Annexure-2: Check List.
03. Annexure-3: Integrity Pact
04. Annexure-4: Important Information.
- 05 Other Tender documents as per this NIT

ANNEXURE - 1

PRE QUALIFYING CRITERIA

JOB	Civil, structural & Architectural Works Comprising of Foundations for GTG, HRSG, Stack, HRSG Chimney, Fans, Pipes & Cable Racks & Other Equipment Foundations, Trenches, Tanks, GTG Hall, Control and Switchgear Rooms with Auxiliary Plant Buildings, Balance of Plant (BOP), CW Pump House, Feed Pool, Paving, Roads, Drains, Culverts, Sewage Systems, Electrical Earthing and other Misc Foundations etc including RCC Bored Cast In Situ piling at Combined Cycle Captive Power Plant, ONGC Hazira Site, Gujarat	
Sl No	Tender Specification Number	Project
1	BHE/PW/PUR/HONGI-CVL/1532	ONGC Hazira Site

SL NO	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Name and Description of qualifying criteria	Page no of supporting document. Bidder must fill up this column as per applicability
A	Submission of Integrity Pact duly signed (if applicable) (Note: To be submitted by Prime Bidder & Consortiums/Technical Tie up partners jointly in case Consortium bidding is permitted, otherwise only by the sole bidder)	APPLICABLE	
B	Technical Bidders shall essentially meet all the Qualifying Requirements (i.e. B.1, B.2, B.3, B.4 & B.5) as under, in last seven years as on latest date of bid submission in industrial projects Or (as specified	APPLICABLE	

in the respective QR):

B.1: Executed “RCC Cast-in-situ Bored pile using Rotary Hydraulic Rigs” with quantity at least **10,890** Running Meter and its corresponding concreting of **2137** CuM within a period of six consecutive months **OR** (at least **21780 Running Meter** and its corresponding concreting of **4274 CuM** within a period of twelve consecutive months) against one or cumulative of two concurrently running industrial Or Infrastructural contracts.

AND

B.2: Bidder should have Executed construction of **STG Deck** of one unit of any MW rating (up to at least Handing over for Mechanical Erection).

AND

B.3: Bidder should have Executed Fabrication and Erection of Structural Steel of at least **580 MT** each, within a period of twelve consecutive months against one or cumulative of two concurrently running contracts.

Note: For QR **B.3**, experience of Fabrication & Erection should be in One Span of **12** Consecutive Months.

AND

B.4: Executed at least **5270 CuM** RCC quantities within a period of twelve consecutive months against

<p>one or cumulative of two concurrently running contracts.</p> <p style="text-align: center;">AND</p> <p>B.5: Bidder should have Executed Civil and Architectural works as below:</p> <p>B.5.1) Executed One similar work of value not less than Rs. 1720 Lakhs against single work order.</p> <p style="text-align: center;">OR</p> <p>B.5.2) Executed Two similar works each of value not less than Rs. 1075 Lakhs against maximum two work orders.</p> <p style="text-align: center;">OR</p> <p>B.5.3) Executed Three similar works each of value not less than Rs. 860 Lakhs against maximum three work orders.</p> <p>Note 1: Industrial projects shall mean projects in sectors like Power /Petro / Chemical/Refinery / Oil and Gas/ Cement /Aviation / Ports /any other sector involving civil & Structural works for setting-up a factory.</p> <p>Note 2:</p> <p>Bidder should have satisfied PQR B.1, B.2, B.3, B.4 & B.5.</p> <p>In case the bidder do not satisfy PQR B.1 & B.2 above, then the bidder</p>		
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	<p>can form consortium/(s) with any one or two party/(ies) who is/are satisfying the PQR (B.1 and/or B.2) above. This will be termed as consortium bidding. In case of consortium bidding following shall be applicable:</p> <ul style="list-style-type: none"> • Prime bidder should have satisfied PQR B.3, B.4 & B.5 above. • Agency/ ies satisfying PQR B.1 and/or B.2 shall be termed as Consortium Partner/ (es). • Prime bidder shall be responsible for satisfying the financial PQR-C. • Prime bidder shall submit the entire tender along with the credentials, all statutory documents and the documents in support of PQR condition of the Consortium Partner. • All conditions as in Clause 23 of NIT 		
<p>C-1</p>	<p><u>Financial TURNOVER</u> Bidders must have achieved an average annual financial turnover (audited) of Rs 645 Lakhs or more over last three Financial Years (FY) i.e. 2012-2013, 2013-14, 2014-15 OR 2011-2012, 2012-2013, 2013-14 if Annual Accounts for FY 2014-15</p>	<p align="center">APPLICABLE</p>	

	are not audited		
C-2	<p>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.</p>	APPLICABLE	
C-3	<p>PROFIT Bidder must have earned cash profit in any one of the three Financial Years as applicable in the last three Financial Years defined in 'C-1' above based on latest Audited Accounts.</p>	APPLICABLE	
D	Assessment of Capacity of Bidder to execute the work as per sl no 9 of NIT (if applicable)	APPLICABLE	By BHEL
E	<p>Approval of Customer (if applicable)</p> <p>Note: Names of bidders (including consortium/Technical Tie up partners in case consortium bidding is permitted) who stand qualified after compliance of criteria A to D shall be forwarded to customer for their approval.</p>	APPLICABLE	BY BHEL
F	<p>Price Bid Opening</p> <p>Note: Price Bids of only those bidders shall be opened who stand qualified after compliance of criteria A to E</p>	APPLICABLE	BY BHEL
F	Consortium tie-ups	APPLICABLE FOR PQR B.1 & B.2	
<p><u>Explanatory Notes for the PQR (unless otherwise specified in the PQR):</u></p> <p>1. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated against C-1 above along with all</p>			

annexures

2. 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 i.e total divided by three.
3. C-2:-NET WORTH: Shall be calculated based on the latest Audited Accounts as furnished for C-1 above. Net worth = Paid up share capital + Reserves. (Net worth is required to be evaluated in case of companies)
4. C-3:- PROFIT : shall be NET profit (PAT + Non cash expenditure viz depreciation) earned during any one of the three financial years as in C-1 above
5. ~~'Additional' Criteria in respect of 'Technical' criteria of PQR (as in 'B' above) for Civil, Electrical, CI, unless otherwise specified :~~
 1. ~~Bidder should have executed similar work of any one of the following:~~
 - a. ~~One (1) work of value not less than Rs XXX~~
_____ OR
 - b. ~~Two (2) works of not less than Rs YYY~~
_____ OR
 - c. ~~Three (3) works of not less than Rs ZZZ~~
(Value XXX, YYY, ZZZ shall be as indicated by BHEL
 2. ~~'Similar' work for criteria 5 above means~~
 - a. ~~Civil or Structures or Civil & Structures or Chimney respectively as applicable to the tendered scope in respect of 'CIVIL' Works~~
 - b. ~~Electrical works in respect of 'ELECTRICAL'~~
 - c. ~~CI works in respect of 'CI' Works~~
 - d. ~~Material Handling and/or Management works in respect of 'MM' works~~
6. Time period for achievement of the 'Technical' criteria of PQR (as in 'B' above) will be the last 7 years ending on the 'latest date' of Bid submission
7. 'EXECUTED' means the Vendor should have achieved the criteria specified in the Technical criteria of PQR (as in 'B' above) even if the Contract has not been completed or closed, Unless otherwise specified, for the purpose of 'Technical' criteria of PQR (as in 'B'

above), the word 'EXECUTED' means:

- ~~1. "BOILER LIGHT UP" in respect of Boiler & Aux and ESP~~
- ~~2. Term 'Commissioning' indicated in PQR refers to 'assistance to commissioning' / 'commissioning'~~
- ~~3. "SYNCHRONISATION" in respect of STG/GTG and 'SPINNING' in case of HTG~~
- ~~4. "STEAM BLOWING COMPLETION" in respect of at least Main Steam Line of Power Cycle Piping~~
- ~~5. "HYDRAULIC TEST" of the system in respect of Structures, Pressure parts/IBR Piping~~
- ~~6. "CHARGING" in respect of power Transformers, Bus ducts, HT/LT switchgears.~~
- ~~7. "Completion of RCC Shell and liner (steel or brick as per tendered scope) up to the HEIGHT specified using slip form" in case of RCC Chimney.~~
8. Achievement of physical Quantities as per respective PQRs in respect of Civil & Structures.
9. 'Readiness for coal Filling" in respect of Bunker Structure Work.
- ~~8. Boiler means HRSG or WHRB or any other types of Steam Generator.~~
- ~~9. Critical/Power Cycle piping means Main Steam, Hot Reheat, Cold Reheat, HP Bypass, LP Bypass lines~~
10. For the purpose of evaluation of the PQR, one MW shall be considered equivalent to 3.5TPH 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 in terms of MW shall be considered for evaluation.
11. In case the experience/PO/WO certificate enclosed by bidders do not have separate break up prices for the E&C portion of Electrical and CI Works, (i.e. the certificates enclosed are for composite order for supply and erection of Electrical & CI and other works if any), then value of Erection and Commissioning for the Electrical & CI portion shall be considered as 15% of the supply & erection of Electrical & CI, unless otherwise specifically indicated in the PQR.
- ~~12. Scope for capital overhaul of STG shall cover Bearing Inspection work and overhauling of all cylinders of the Turbine~~

~~unless otherwise specifically indicated in the PQR.~~

~~13. In case the tendered scope is not a Pulverized Fuel Boiler, experience of Oil/Gas Fired Boilers also can be considered unless otherwise specifically indicated in the PQR~~

14. The value of work (Experience submitted against PQR B) shall be updated as per the PVC indices for "All India Avg. Consumer Price Index for Industrial Workers" with base month as date of execution (completion of contract/work) and indexed upto two months prior to bid opening month.

15. Explanatory Notes for PQR "B.1 & B.2":

Consortium Bidding is permitted in this tender. Clause No 23.0 of NIT shall hence be applicable. Following may kindly be noted in this regard:

- Provisions/Eligibility of Consortium is detailed in "Annexure I" of NIT "Pre Qualifying Requirement" (PQR B).
- Prime bidder and Consortium Partner shall meet their respective technical Pre qualifying Criteria.
- Number of partners including Prime Bidder shall not be more than 3.
- Prime Bidder/Leader of Consortium shall be responsible for entire scope of work and shall be the single contact window for BHEL. However Prime Bidder and the consortium partner shall be individually and severally responsible for completion of work as per schedule.
- Prime Bidder/Leader of the consortium shall submit tender to BHEL along with the credentials and other statutory documents of the consortium partner in support of PQR.

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

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Bidder's Response to BHEL TECHNICAL PQR (WHICHEVER IS APPLICABLE)

PQR No	Pre-Qualifying Requirement	Credentials (Detailed Work Order, Completion Certificate and TDS Certificates) based on which bidder is claiming PQR	Reference of the documents	Page No
B.1	B.1: Executed "RCC Cast-in-situ Bored pile using Rotary Hydraulic Rigs" with quantity at least 10,890 Running Meter and its corresponding concreting of 2137 CuM within a period of six consecutive months OR (at least 21780 Running Meter and its corresponding concreting of 4274 CuM within a period of twelve consecutive months) against one or cumulative of two concurrently running industrial Or Infrastructural contracts.			
B.2	B.2: Bidder should have Executed construction of STG Deck of one unit of any MW rating (up to at least Handing over for Mechanical Erection).			
B.3	B.3: Bidder should have Executed Fabrication and Erection of Structural Steel of at least 580 MT each, within a period of twelve consecutive months against one or cumulative of two concurrently running contracts.			

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B.4	B.4: Executed at least 5270 CuM RCC quantities within a period of twelve consecutive months against one or cumulative of two concurrently running contracts.		
B.5.1	Executed One similar work of value not less than Rs. 1720 Lakhs against single work order		
B.5.2	Executed Two similar works each of value not less than Rs. 1075 Lakhs against maximum two work orders.		
B.5.3	Executed Three similar works each of value not less than Rs. 860 Lakhs against maximum three work orders.		

NOTE:
BIDDERS MUST CLEARLY INDICATE IN THE TABLE ABOVE, HOW THEY ARE SATISFYING TECHNICAL PQR ALONG WITH THE REFERENCE OF THE SUPPORTING DOCUMENTS AND THE PAGE NUMBER IN WHICH THE REFERRED DOCUMENTS ARE ANNEXED IN THE BID DOCUMENT.
BHEL WILL NOT CONSIDER ANY OTHER DOCUMENT OTHER THAN THOSE SPECIFIED BY THE BIDDERS IN THE TABLE ABOVE FOR EVALUATION OF TECHNICAL PQR.
BIDDER MAY ATTACH SEPERATE SHEET IF NECESSARY

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8	Copy of PAN Card	Applicable / Not Applicable	YES/NO
9	Whether all pages of the Tender documents including annexures, appendices etc are read understood and signed	Applicable / Not Applicable	YES/NO
10	Integrity Pact	Applicable / Not Applicable	YES/NO
11	Declaration by Authorized Signatory	Applicable / Not Applicable	YES/NO
12	No Deviation Certificate	Applicable / Not Applicable	YES/NO
13	Declaration confirming knowledge about Site Conditions	Applicable / Not Applicable	YES/NO
14	Declaration for relation in BHEL	Applicable / Not Applicable	YES/NO
15	Non-Disclosure Certificate	Applicable / Not Applicable	YES/NO
16	Bank Account Details for E-Payment	Applicable / Not Applicable	YES/NO
17	Capacity Evaluation of Bidder for current Tender	Applicable / Not Applicable	YES/NO
18	Tie Ups/Consortium Agreement are submitted as per format	Applicable / Not Applicable	YES/NO
19	-Power of Attorney for Submission of Tender/Signing Contract Agreement -Power of Attorney of Consortium Partner/ (es).	Applicable / Not Applicable	YES/NO
20	Analysis of Unit rates	Applicable / Not Applicable	YES/NO

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

DATE:**AUTHORISED SIGNATORY****(With Name, Designation and Company seal)**

Annexure-3

IMPORTANT INFORMATION

Sealed Tenders shall be submitted at following address to AGM /Purchase BHEL PSWR NAGPUR:

BHEL PSWR, SRIMOHINI COMPLEX, 345 KINGSWAY, NAGPUR 440001, INDIA

All correspondences regarding this tender shall be addressed to AGM / PURCHASE BHEL PSWR at above address. Bidders may also opt to correspond with following BHEL officials regarding this tender through email at following email ids. However please be informed that sealed tenders shall necessarily be submitted in original at above address:

AGM Purchase, Email id: rajeebc@bhhelpswr.co.in. Ph: +91 – 712 – 3048633

Sr Engineer Purchase, Email: pgv@bhhelpswr.co.in, Ph: +91 – 712 – 3048713

Sr Engineer Purchase, Email: nktiwari@bhhelpswr.co.in Ph: +91-712-3048651

Engineer Purchase, Email id: svm@bhhelpswr.co.in , Ph: +91 – 712 – 3048715

1. **The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site (www.bhel.com ---> Tender Notification -> List of Banned Firms)**
2. **Refer Chapter XII of Volume IB Special Conditions of Contract regarding Suspension of Business Dealings: The abridged version of extant ‘Guidelines for suspension of business dealings with suppliers/contractors’ has now been uploaded on www.bhel.com on “supplier registration page” at the following link: http://www.bhel.com/vender_registration/pdf/Suspension-of-Business-Dealings-with-Supplier-issued-Sept13_abridged.pdf**
3. **All Statutory Requirements as applicable for this project shall be complied with.**
4. **Please take note of following Revised Tender Clauses:**
 - i. Notice Inviting Tender: SL No 9

-
- ii. General conditions of Contract: Clause No 1.15.13 (New), Clause No 2.8.3, 2.8.4 and 2.8.5

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

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

6. PRICE VARIATION CLAUSE

Revision in Price Variation Compensation Clause no. 2.17 of Vol I C GCC:

Clause No. 2.17 of Vol IC GCC is revised as below:-

2.17 PRICE VARIATION COMPENSATION (During Original Contract Period and Extension if any)

2.17.1 In order to take care of variation in Total Minimum Per Day Wages of all categories of workers/labors, Price Variation Formula as described herein shall be applicable

2.17.2 20 % component of Contract Value shall be permitted to be adjusted for variation in Total Minimum per Day Wage of 'UNSKILLED LABOUR/WORKERS' during execution of work. The remaining 80% shall be treated as fixed component

2.17.3 Payment/recovery due to variation labor index during execution of work shall be determined on the basis of the following notional formula:

$$P = 20 \% \times R \times \frac{(X_N - X_0)}{X_0}$$

Where

P = Amount to be paid/recovered due to variation in Total Minimum Per Day Wage of 'UNSKILLED LABOUR/WORKERS'

R = Value of work done for the billing month (Excluding Taxes and Duties if payable extra)

XN = Revised Total Minimum per Day Wage of 'UNSKILLED LABOUR/WORKERS' for the billing month under consideration

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.....
Xo = Total Minimum per Day Wage of 'UNSKILLED LABOUR/WORKERS'
as on the Base date.

2.17.4 Base date shall be calendar month of the latest date of submission of Tender

2.17.5 Total Minimum Per Day Wage of 'UNSKILLED LABOUR/WORKERS' applicable for the billing month and the base month shall be as per the authorized notification/circulars issued by the Principle Employer (BHEL's Customer) regarding prevailing (billing Month or base month) minimum total per day labor wage of UNSKILLED LABOUR/WORKERS applicable in the project

2.17.6 PVC shall not be payable for the ORC amount, Supplementary/Additional Items, Extra works

2.17.7 The contractor will be required to raise the bills for price variation payments on a monthly basis along with the running bills irrespective of the fact whether any increase/decrease in the Total Minimum Per Day Wage of 'UNSKILLED LABOUR/WORKERS' has taken place or not. In case there is delay in publication/issuance of authorized notification/circulars (final figure), the PVC bill shall be deferred till the issuance of the same

2.17.8 PVC shall be applicable for the entire original contract period plus the extended period. The total amount of PVC shall not exceed 5 % of the cumulatively executed contract value. Executed contract value for this purpose is exclusive of PVC, ORC, Supplementary/Additional Items and Extra works. However the Total Quantum of Price Variation amount payable/recoverable during delayed/extended period shall be regulated as follows

- i) For the portion of backlog attributable to the contractor, the PVC will be based on the average of the Total Minimum Per Day Wage of 'UNSKILLED LABOUR/WORKERS' for the period of the original contract period
- ii) For the period of Force Majeure, the PVC will be limited to Total Minimum per Day Wage of 'UNSKILLED LABOUR/WORKERS' applicable at the beginning of the force majeure period.
- iii) For the portion of backlog attributable to BHEL, the PVC will be as per the Total Minimum per Day Wage of 'UNSKILLED LABOUR/WORKERS' applicable for the respective months.

2.17.9 Additional PVC during Contract Extension Period

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- i) In order to take care of variation in cost of execution of work on either side, due to variation in the index of LABOUR, HIGH SPEED DIESEL OIL, WELDING ROD, CEMENT, STEEL, MATERIALS, Additional Price Variation Formula as described herein shall be applicable during contract extension period. **Additional PVC shall be applicable only during the extended period of contract (if any)** after the schedule completion date for the portion of work delayed / backlog for the reasons not attributable to Contractor
- ii) 65 % component of **Executed Value (during extended period)** shall be permitted to be adjusted for variation in various relevant indices during extended contract period. The remaining 35% shall be treated as fixed component.
- iii) The basis for calculation of price variation in each category, their component, Base Index, shall be as under:

<u>Sl No</u>	<u>CATEGORY</u>	<u>Base Index</u>	<u>Component K</u>
<u>01</u>	LABOUR (ALL CATEGORIES)	MONTHLY AVERAGE CONSUMER PRICE INDEX NUMBERS FOR INDUSTRIAL WORKERS' for SURAT CENTRE of GUJARAT State published by Labor Bureau, Ministry of Labor and Employment, Government of India. (Website: labourbureau.nic.in)	<u>10</u>
<u>02</u>	HIGH SPEED DIESEL OIL	Name of Commodity: HSD OIL. Type : INDIVIDUAL COMMODITY (See Note below)	<u>5</u>
<u>03</u>	CEMENT	Name of Commodity : GREY CEMENT Type: INDIVIDUAL COMMODITY	<u>30</u>
<u>04</u>	STEEL (Structural and Reinforcement Steel)	Name of Commodity : IRON & SEMIS Type: GROUP ITEM	<u>Zero</u>
<u>05</u>	MATERIALS	Name of Commodity: ALL	<u>20</u>

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	(Other than Cement & Steel)	COMMODITIES Type: GROUP ITEM	
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Note:

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

- iv) Payment/recovery due to variation in index shall be determined on the basis of the following notional formula without any initial absorption, in respect of the identified components viz LABOUR, HIGH SPEED DIESEL OIL, WELDING ROD, CEMENT, STEEL, MATERIALS

$$P = K \times R \times \frac{(X_N - X_0)}{X_0}$$

Where

P = Amount to be paid/recovered due to variation in the Index for Labor, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials

K = Percentage component applicable for Labor, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials

R = Value of work done for the billing month during extended period (Excluding Taxes and Duties if payable extra)

XN = Revised Index No for Labor, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials for the billing month under consideration

Xo = Index no for Labor, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials as on the Base date

- v) Base date shall be the calendar month of the schedule completion date of the contract. Schedule Completion date shall be the actual start date plus contract period as defined in Chapter VI 'Vol IA TCC'
- vi) Additional PVC shall not be payable for the ORC amount, Supplementary/Additional Items, Extra works
- vii) The contractor shall furnish necessary monthly bulletins for the necessary indices from the relevant websites along with his Bills

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- viii) The contractor will be required to raise the bills for additional price variation payments on a monthly basis during extended period along with the running bills irrespective of the fact whether any increase/decrease in the index for relevant categories has taken place or not. In case there is delay in publication of bulletins (final figure), the provisional values as published can be considered for payments and arrears shall be paid/recovered on getting the final values
- ix) Total quantum of Additional Price Variation amount payable/recoverable shall be regulated as follows:
- a) For the portion of backlog attributable to the contractor and for the portion of backlog due to force majeure condition during contract period, Additional PVC shall not be paid.
 - b) For the period of force Majeure during extended contract period, Additional PVC will be as per the indices applicable at the beginning of the force majeure period (during extended period).
 - c) void
 - d) The total amount of additional PVC shall not exceed 20% of the cumulatively executed contract value during the extended contract period. Executed contract value for this purpose is exclusive of PVC, ORC, Supplementary/Additional Items and Extra works.

7. QUANTITY VARIATION

Revision in QUANTITY VARIATION Clause no. 2.14 of Vol I C GCC:

Clause No. 2.14 of Vol IC GCC is revised as below:-

Rates for individual items shall remain firm for any variation in the respective quantity up to plus (+) 30 % and minus (-) 100 %.

For any variation in individual item quantities beyond plus (+) 30 %, the item rate of that item shall be increased by 5 % i.e. payment for the quantities executed beyond 130 % of the tendered quantity shall be made @ of 105 % of the awarded rate of that particular item. Contractor shall not be eligible for any other compensation on this account

For any variation in individual item quantity on negative side or in case any item is not operated at all, there will be no revision in the item rates during entire contract period and extended period if any.

However In case the finally executed contract value reduces below 85 % of the ordered total value due to quantity variation, the contractor will be eligible for compensation @ 15% of the difference between the 85% of the ordered value and the actual executed value. For this purpose executed

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contract value shall also include items quantities which are paid @ 105 % of ordered rate due to variation beyond plus (+) 30%.

8. OVER RUN COMPENSATION

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

9. Acceptance of Bank Guarantee (BG)

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

Clause No. 1.10.3 (V) 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”.

10. Broad Terms & Conditions of Reverse Auction

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In continuation to Clause 19.0 of NIT (Notice Inviting Tender) following are the broad terms and conditions of Reverse Auction are given in Annexure V of NIT:

- 10.1. Against this enquiry for the subject item/ system with detailed scope of supply as per enquiry specifications, BHEL may resort to “REVERSE AUCTION PROCEDURE” i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).
- 10.2. BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids. In case BHEL decides to go for Reverse Auction, only those bidders who have given their acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit „online sealed bid“ in the Reverse Auction. Non-submission of „online sealed bid“ by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
- 10.3. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- 10.4. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit ‘online sealed bid’ in the Reverse Auction. Non-submission of ‘online sealed bid’ by the bidder for any of the eligible items for which techno-commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
- 10.5. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
- 10.6. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.

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- 10.7. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
- 10.8. Bidders have to fax the Compliance form (annexure IV) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.

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TECHNICAL CONDITIONS OF CONTRACT (TCC)

TECHNICAL CONDITIONS OF CONTRACT (TCC) CONTENTS

SL. No	DESCRIPTION	Chapter	No. OF PAGES
Volume-IA	Part-I: Contract specific details		
1	Project Information	Chapter-I	2
2	Scope of Works and Technical Specifications	Chapter-II	24
3	Facilities in the scope of Contractor/BHEL (Scope Matrix)	Chapter-III	6
4	T&Ps and MMEs to be deployed by Contractor	Chapter-IV	3
5	T&Ps and MMEs to be deployed by BHEL on sharing basis	Chapter-V	1
6	Time Schedule	Chapter-VI	2
7	Terms of Payment	Chapter-VII	2
8	Taxes and other Duties	Chapter-VIII	3
9	Tender Drawings	Chapter-IX	1
10	Appendix	Chapter-X	1
11	Chapter XI BOQ and Percentage	Chapter-XI	1

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - I: PROJECT INFORMATION

1.0	Project Information: ONGC is setting up combined cycle captive power plant at its existing facility at Hazira.	
1.1	INTRODUCTION	
	<i>Approach to site</i>	
	1.0	Location ONGC Limited, Hazira
	2.0	Elevation above mean sea level RL 6.0 above, MSL
	3.0	Nearest Railway Station Surat, 20 KM
	4.0	Nearest Airport Surat, 10 KM
	5.0	Nearest Harbor Magdalla, 20 KM
	6.0	Access Road NH-8 (30 KM)
	7.0	Atmospheric pressure at MSL 1.013 bar
	8.0	Ambient Temperature
	a)	Max. average dry bulb temperature 45.6°C
	b)	Min. average dry bulb temperature 4.4°C
	c)	Design temperature for electrical equipment / device 50°C
	9.0	Relative Humidity
	a)	Max. 70%
	b)	Min. 18%
	c)	Average 64%
	10.0	Seismic Zone III (IS 1893)
	11.0	Rainfall
	a)	Max. Intensity of rainfall in 24 hrs. 459.2 mm
	b)	Period – Monsoon showers June to September
	c)	Average rainfall per annum 1203.5 mm
	12.0	Wind data

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - I: PROJECT INFORMATION

	Max. wind speed (as per IS:875) 20-61 Kmph for 20 days in a year < 20 Kmph for remaining period	62 Kmph
	Most predominant wind direction	South -West
<p>Above information furnished are for general guidance of Contractor. However Contractor is 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.</p>		

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II : SCOPE OF WORKS AND TECHNICAL SPECIFICATIONS

2.1 SCOPE OF WORK

2.1.1 Filling, Leveling and Grading:

Earthwork, filling and leveling in proposed power plant area in proposed CCCPP area.

2.1.2 Micro Grading:

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

2.1.3

The work to be performed under the scope of this tender mainly consists of but not limited to complete Civil, structural and Architectural work and their maintenance for specified period of the following plant buildings, structural equipment foundations and other miscellaneous structures.

For building sizes and number of equipment's refer plot plan, please note that these are tentative and likely to change.

a. Buildings

- i. GTG shed
- ii. STG shed
- iii. Cellar cum SWGR cum Control Building
- iv. DG room
- v. Air Compressor and Work shop
- vi. Cooling water pump shed
- vii. Cooling water chlorination shed
- viii. Chemical labs
- ix. Cooling water treatment system Building

b. Foundations for the following Equipment, Pits and Tanks

- i. GTG & Auxiliaries
- ii. STG & Auxiliaries
- iii. HRSG & Auxiliaries
- iv. HRSG steel chimney
- v. GT, STG, Station & Auxiliary Transformers

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II : SCOPE OF WORKS AND TECHNICAL SPECIFICATIONS

- vi. DG Set & Auxiliaries.
- vii. DM Tank foundation
- viii. CW Make up Tank
- ix. BFP's
- x. Air compressor & Auxiliaries
- xi. DM Plant (Mixed Bed Exchanger)& Auxiliaries
- xii. Other Miscellaneous equipment
- xiii. Tanks/Pits/Underground Structure
- xiv. Pits, Manholes
- xv. Sump

c. Foundation & super structure for the following

- i. Pipe Rack cum cable rack
- ii. De-aerator structure
- iii. Vent silencer structure
- iv. Valve operating platforms

d. Construction of following services

Structural platforms, monorail beams, walkways, crossovers, handrails etc for miscellaneous equipment, piping etc.

- i. Storm Water drain system
- ii. RCC approach roads
- iii. RCC pavements
- iv. Dyke wall and Fire walls
- v. Acid Alkali Proof Lining
- vi. Safety shower and eye wash system
- vii. Fire protection system
- viii. Crane movement road, main road approach roads, drains culverts
- ix. ERC/IRC
- x. Process waste collection system
- xi. WWS-Waste Water Sewer
 - a) Oily Waste Sewer (OWS)
 - b) Contaminated Rain/Fire Water Sewer(CRWS)
- xii. WDK-Potable Drinking water system
- xiii. Sanitary and plumbing system in the buildings
- xiv. Cooling water Supply &Return(WCS/WCR)
- xv. RCC Electrical/Instrumentation cable trenches and pipe trenches
- xvi. Road Crossings
- xvii. Culverts

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II : SCOPE OF WORKS AND TECHNICAL SPECIFICATIONS

- xviii. Pipe way Bridges
- xix. Pipe way Sleepers
- xx. Crossings (Culverts, bridges, sleeves as per applicable) of underground services below approach road for all services in the corridor including drains, fire water lines, cooling water lines, waste sewers.
- xxi. Hard stand required for erection of heavy equipment.
- xxii. Strengthening of existing roads for crane movement if required.
- xxiii. All approach roads from existing main roads as per detailed engineering requirement for maintenance and operation.
- xxiv. Maintenance and erection approach roads/ by strengthening of roads.
- xxv. Preparation of basic/ detailed engineering drawings for construction, and getting approval of the same from PMC/ Owner/ Licensor.
- xxvi. Any temporary activities required to complete the work.
- xxvii. Micro grading & disposal of surplus and unserviceable material beyond ONGC Hazira complex's compound wall. Contractor to assess the lead by physically visiting the Plant site.
- xxviii. Approval from statutory and local authorities. The layout of all the facilities including inter distances between hydrocarbon storage tanks and distances with respect to other facilities shall be ensured as per provisions of OISD-118 and Petroleum Rules.
- xxix. The sub-grade for roads & pavements and soil improvement/ preparation below foundation level of drains, culverts, pipe way bridges, manholes, etc. shall be carried out as per Geo-Technical recommendation.
- xxx. The plot for construction area/ fabrication yard/ field office/ construction stores has to be developed by the contractor of its own and the Client shall only identify the space on as in where is basis. All the infrastructure facilities which include roads, approaches, drainage system, pavements etc. shall be developed & provided by the contractor of its own.

2.1.4 THE WORK WILL INVOLVE

All civil, structural and architectural works connected with the above mentioned structures such as earth work, concrete work, brick work, steel work, embedment, plastering and painting, wooden and metal doors, windows and partitions, waterproofing, flooring, plumbing, road work, drainage, grouting etc.

2.1.5 PILING WORK :

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II : SCOPE OF WORKS AND TECHNICAL SPECIFICATIONS

- a. Installation & Testing of 500mm dia. bored cast-in situ piles approximately 20m long from pile cut-off.
- b. The scope of work will also cover all works connected with installations and testing of Bored Cast-in-situ piles including mobilizations of hydraulic rig and other equipment's their erection/dismantling/transportation/assembling and erecting from one area to another within the plant, preparation of firm ground as required for supporting the pile rigs, supply of materials, sampling and testing of materials consumables, labours, transportation, testing of piles, cutting of piles above PCL (pile cut-off level) and embedding the exposed reinforcement of pile in pile cap, removal of debris etc. all complete as required for the proper and satisfactory completion of the job. The scope also covers carrying out initial tests on piles to assess their vertical, horizontal and pull out load carrying capacities and other dynamic tests as per technical specification.
- c. To carry out field and lab test on piles, preparation and submission of reports to BHEL as per technical specification.
- d. The work shall include supplying and providing all necessary materials, mobilization of all necessary equipment's, **excluding supply of Reinforcement which shall be supplied by BHEL free of cost** providing necessary engineering supervision through qualified and technical personnel, skilled and unskilled labour, etc. as required carrying out the complete piling work, and submission of reports as per schedule to BHEL.
- e. Above jobs shall be executed as per BHEL Engineer's instructions, drawings, detailed specification and respective bill of quantities furnished in the Rate Schedule.
- f. The project site is clear of any kind of vegetation and is leveled, however if required the contractor may carry out dressing and leveling etc., for positioning, movement of its rig from one location to another and other site activities for carrying out the piling work. No separate payment will be made towards the same.
- g. The rate shall also be inclusive of setting out the location and levels of the proposed piles from existing grid levels and bench marks furnished by ONGC/BHEL. The contractor should have its own surveyor and surveying equipment's like total station and auto levels or can engage an agency carrying out surveying work with approval of BHEL for carrying out the surveying work for finalizing

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II : SCOPE OF WORKS AND TECHNICAL SPECIFICATIONS

the location and levels of test piles. No separate payment will be made towards the same.

- h. The works to be performed under this contract consist of providing all labor, supervision, material, scaffolding, construction equipments, piling equipments, tools and plants, temporary works, supplies, transportation and all incidental items not shown or specified but reasonably implied or necessary for the proper completion of work in all respects. Testing of all materials, concrete, earthwork other allied works, shall be also included.
- i. The contractor shall provide the owner/BHEL such an assistance, instruments, machines, labor and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used.
- j. Providing all incidental items not shown or specified but reasonably implied or necessary for the successful completion of the work in accordance with contract.
- k. 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.
- l. Vendor has to provide temporary liner for piling for prevention of bore collapsing of required length wherever required. No separate payment will be made towards the same.
- m. Submission of final reports of all tests to BHEL.

2.1.6 CIVIL AND ARCHITECTURAL WORKS

The scope covers all Civil and Architectural within the battery limits. The important works covered are as below.

- a. Earthwork, filling and leveling in proposed power plant area from present approx. RL(+)6.0m to proposed RL(+)7.5m including slope protection by stone pitching, cutting of tree, shrubs, and other matters in proposed CCCPP area.
- b. Excavation of earth and backfilling including dewatering of excavations for foundations, trenches, tunnels pits, etc. till the construction of the same is completed and disposal of surplus.

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Chapter – II : SCOPE OF WORKS AND TECHNICAL SPECIFICATIONS

- c. Construction of RCC pile caps with pedestals, foundation footing for lightly loaded structures, trenches, tunnels, sumps, grade beams, tie beams at foundation level, grade slabs, floor slabs and roof slabs, equipment foundations etc.
- d. Complete civil and architectural works such as brick work, plastering, painting, all types of floor / roof finishes, all types joinery etc.
- e. 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.
- f. Preparation of detailed working drawings and bar bending schedules for all reinforced concrete work and getting them approved by the BHEL Engineer.
- g. Taking delivery from BHEL stores, fabrication and fixing structural steelwork for cable trench covers, plates etc.
- h. Supply Fabrication and fixing of anchor bolts, sleeves, fixing frames, embedment etc. in concrete.
- i. Supply of all instruments and personnel for conducting necessary tests at site as specified/as directed by the Engineer.

2.1.7 STRUCTURAL WORKS

The work involves:

- a. Taking delivery from BHEL stores fabrication and erection of structural steel work including all interfacing work and miscellaneous work. **Supply of steel will be made by BHEL free of cost.** The nature of work shall include columns, beams, splicing of steel works as needed, bracings, purling, sheeting runners, sag rods, ties, struts walkways, galleries, stairs, ladders, handrails, floor gratings, chequered plate work, M.S, pipes, equipment supporting platforms and all other structures required for successful completion of project.
- b. Connection design & preparation of fabrication drawings as per agreed schedule before starting fabrication work for any structural GA drawing including appointment of a separate agency, approved

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by BHEL, for review and approval of fabrication drawings in consultation with BHEL.

- c. Fixing of floor gratings as per Specifications. BHEL will supply MS Gratings free of cost, painting or galvanization over MS gratings shall be in the scope of contractor. Payments for painting or galvanization shall be made as per respective items.
- d. Supply and fixing of high tensile bolts, mild steel bolts, nuts, plain/taper and spring washers, all electrodes required for shop and field work.
- e. Shop and final painting as per Technical Specification after properly cleaning the steel surfaces.
- f. Grouting under stanchion bases.

2.1.8 GENERAL

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

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

- b. 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.
- c. 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.

2.1.9 ALSO INCLUDED IN THE SCOPE

Unless otherwise specified, the work to be provided by the contractor for the items mentioned in the “Schedule of items” shall include but not be limited to the following.

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Chapter – II : SCOPE OF WORKS AND TECHNICAL SPECIFICATIONS

- a. Furnishing all labor, materials, supervision, construction plans, equipment, supplies, transport, to and from the site, fuel, electricity, compressed air, water, transit and storage insurance and all other incidental items and temporary works not shown on specified but reasonably implied or necessary for the proper completion, maintenance and handling over the works, except in accordance with the stipulations laid down in the contract documents and additional stipulations as may be provide by the engineer during the course of works.
- b. Furnishing samples of all materials required by the engineers for testing/inspection and approval for use in the works. The samples may be retained by the engineer for final incorporation in the works.
- c. Furnishing test reports for the products used or intended to be used, if called for the specifications or if so desired by the engineer.
- d. 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.
- e. Arranging manufacturer's supervision for items of work done as per manufacturer's specifications when so specified.
- f. 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 an assistance, instruments, machines, labor and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used.
- g. Providing all incidental items not shown or specified but reasonably implied or necessary for the successful completion of the work in accordance with contract.

2.1.10 WORK BY OTHERS

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

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Chapter – II : SCOPE OF WORKS AND TECHNICAL SPECIFICATIONS

2.2 TECHNICAL SPECIFICATIONS & DRAWINGS FOR INFORMATION

2.2.1 SECTION – A: LIST OF TECHNICAL SPECIFICATIONS

SL. NO.	DESCRIPTION	SPECIFICATION NUMBER	RE V	PAGE S
1	GENERAL SCOPE	PEDC/STD.SPEC/001	0	4
2	PROPERTIES. STORAGE & HANDLING OF COMMON BUILDING MATERIALS.	PEDC/STD.SPEC/002	0	5
3	EARTHWORK INEXCAVATION & BACKFILLING.	PEDC/STD.SPEC/003	0	23
4	CEMENT CONCRETE - PLAIN & REINFORCED	PEDC/STD.SPEC/004	0	56
5	FABRICATION & STRUCTURAL STEEL WORK.	PEDC/STD.SPEC/005	0	25
6	ERECTION OF STRUCTURAL STEEL WORK.	PEDC/STD.SPEC/006	0	15
7	MISCELLANEOUS STEEL WORK.	PEDC/STD.SPEC/007	0	5
8	MISCELLANEOUS METAL.	PEDC/STD.SPEC/008	0	6
9	PAINTING ON STRUCTURAL STEEL.	PEDC/STD.SPEC/009	0	5
10	INSERTS / EMBEDMENTS IN CONCRETE WORK.	PEDC/STD.SPEC/010	0	3
11	GROUTING.	PEDC/STD.SPEC/011	0	4
12	MASONRY & ALLIED WORKS.	PEDC/STD.SPEC/012	0	8
13	FINISH TO MASONRY & CONCRETE.	PEDC/STD.SPEC/013	0	7
14	PAINTING, WHITEWASHING, POLISHING etc.	PEDC/STD.SPEC/014	0	11
15	FLOOR FINISHES & ALLIED WORKS.	PEDC/STD.SPEC/015	0	26
16	GLASS & GLAZING.	PEDC/STD.SPEC/016	0	3
17	METAL DOORS, WINDOWS, VENTILATORS, LOUVERS etc.	PEDC/STD.SPEC/017	0	10
18	ROLLING STEEL SHUTTERS & GRILLS.	PEDC/STD.SPEC/018	0	4
19	ROOF WATER PROOFING, INSULATION & ALLIED WORKS.	PEDC/STD.SPEC/019	0	9
20	FALSE CEILING.	PEDC/STD.SPEC/020	0	5
21	CARPENTARY & JOINERY.	PEDC/STD.SPEC/021	0	6
22	WATER SUPPLY WORKS.	PEDC/STD.SPEC/022	0	11

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23	DRAINAGE & SANITATION.	PEDC/STD.SPEC/023	0	17
24	SUPPLY & LAYING RCC PIPES.	PEDC/STD.SPEC/024	0	4
25	PREMOULDED BITUMINOUS JOINT FILLER & SEALING COMPOUND.	PEDC/STD.SPEC/025	0	2
26	DEMOLITION & DISMANTLING.	PEDC/STD.SPEC/026	0	5
27	TYPE & MAKE OF MATERIALS TO BE USED.	PEDC/STD.SPEC/027	0	2
28	FALSE FLOORING.	PEDC/STD.SPEC/028	0	4
29	50mm THK PREMIX BITUMINOUS CARPET (HOT PROCESS) OVER WBM ROAD SURFACE.	PEDC/STD.SPEC/029	0	4
30	WATER BOUND MACADAM.	PEDC/STD.SPEC/030	0	7
31	RUBBLE MASONARY.	PEDC/STD.SPEC/031	0	4
32	CHAIN LINK FENCING.	PEDC/STD.SPEC/032	0	3
33	SHEETING WORK IN ROOF F / SIDING.	PEDC/STD.SPEC/033	0	4
34	TANK PADS.	PEDC/STD.SPEC/034	0	5
35	CONCRETE PAVEMENTS.	PEDC/STD.SPEC/035	0	11
36	ANTI TERMITE TREATMENT.	PEDC/STD.SPEC/036	0	4
37	FIRE PROOFING OF STEEL STRUCTURES WITH RCC.	PEDC/STD.SPEC/037	0	4
38	COATING & WRAPING OF UNDER GROUND PIPES.	PEDC/STD.SPEC/038	0	15
39	UNDERGROUND EARTHING SYSTEM.	PEDC/STD.SPEC/039	0	7
40	PILING.	PEDC/STD.SPEC/040	0	
	(b) PART II - GENERAL SPECIFICATIONS.	PEDC/STD.SPEC/004 0-b	0	4
	(c) PART III - SPECIFIC REQUIREMENTS.	PEDC/STD.SPEC/000 -c	1	8
	(d) PILING PART-IV – MATERIAL FOR REINFORCED CONCRETE PILES	PEDC/STD.SPEC/004 0-d	0	8
	(e) PILING PART-V -TESTING OF CONCRETE PILES	PEDC/STD.SPEC/004 0-e	0	11
	(f) PILING PART-VI -CONSTRUCTION AND INSTALLATION OF RCC BORED CAST IN-SITU PILES	PEDC/STD.SPEC/004 0-f	0	8

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II : SCOPE OF WORKS AND TECHNICAL SPECIFICATIONS

41	GRADING AND FILLING	PEDC/STD.SPEC/004 2	0	
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2.2.2 SECTION – B: LIST OF TENDER DRAWINGS

SL. NO.	TITLE	DRAWING No.	RE V	COP Y TO PES R
1	PLOT PLAN (TENDER PURPOSE ONLY)	03810101570	R2	PDF
2	TYPICAL REMOVABLE TYPE TRANSFORMER GATE & FENCING DETAILS	1-38144-00062	R0	-DO-
3	SOAK PIT DETAILS	3-38144-00003	R0	-DO-
4	DETAILS OF ALUMINIUM PARTITIONS	3-38144-00008	R0	-DO-
5	SEPTICK TANK (25 USERS)	3-38144-00009	R0	-DO-
6	STANDARD DETAIL OF ANTI TERMITE TREATMENT	4-38144-00004	R0	-DO-
7	STD DWG for OWS Drain Funnels	NA	NA	NA
8	PIPE ELECTRODE	GT 57191(P-10/37)	R0	-DO-
9	EARTH ELECRODE IN TEST PIT	GT 57191(P-11/37)	R0	-DO-
10	ALL RELIVANT FICHTNER SPEC & DRAWINGS.			

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.

2.3 PREAMBLE TO THE SCHEDULE OF QUANTITIES (SOQ)

2.3.1 Details of the items in this Schedule shall be read in conjunction with the corresponding FICHTNER/ ONGC Hazira specifications, drawings and other documents and shall have precedence over any contrary statement mentioned anywhere in this document.

2.3.2 The work shall be carried out as per construction drawings, specifications, the description of the items in this schedule

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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.

- 2.3.3 Items of work provided in this schedule but not covered in the specifications shall be executed strictly as per instructions of the Engineer.
- 2.3.4 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.
- 2.3.5 The rate quoted shall be inclusive of cleaning the site of any vegetation, dressing and leveling etc., required for commencement of site activities. No separate payment will be made towards the same.
- 2.3.6 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.
- 2.3.7 The quantities of the various items mentioned in the schedule are approximate and may vary up to any extent or be deleted altogether. The quoted rates of each item shall remain firm as long as the variation in the total value of the works remain within +/- 15% (Fifteen percent) of the Bid Price of the work. The contractor extent of the work to be executed under any particular item in this schedule, before, under taking any preliminary work or purchasing bought out component related to the work.

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- 2.3.8 Rates shall be quoted both in figures and in words in clear legible writing. No over writing is allowed. All scoring and cancellation should be counter signed by the bidder. In case of illegibility, the interpretation of the engineer shall be final. All entries shall be in English language.
- 2.3.9 Engineers decision shall be final and binding on the contractors regarding clarification of items in this schedule with respect to the other section of the contract.
- 2.3.10 Unless otherwise specified in the schedule of items cement, structural and reinforcement steel will be issued by BHEL at issue rates specified elsewhere in this tender document.
- 2.3.11 In case of any discrepancy between item descriptions, 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.

HIERARCHY

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

- Statutory Regulations
- FICHTNER / ONGC Hazira specification
- Items in Schedule of quantities
- IS/BS standards
- BHEL's standard specification (with prior approval of Engineer-in-charge).

2.4 Construction Power & Water:

- 2.4.1 Construction power (three phase, 415 V/ 440 V) will be provided at one point near the site at a distance of approx. 500M. **The electricity shall be provided on chargeable basis at the rate of Rs 5.00/- per KWH.** Further distribution shall be arranged by the contractor at his own cost. Contractor shall be responsible for fulfillment of all requirements including statutory requirements in this regard. Contractor shall deploy and install required energy meter, cables, fuses, distribution boards, switchboards, bus bars, earthing

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arrangements, protection devices and any other installation as specified by statutory authority/act. Contractor shall also obtain approvals of appropriate authority and pay necessary fees, levies etc towards the clearance of such installations, prior to use. Sufficient power factor compensation equipments like capacitor shall be provided by contractor for reactive loads like welding machines etc. In case of any fine/penalty on account of low power factor, same shall be shared by contractor proportionately according to power consumption.

- 2.4.2 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.
- 2.4.3 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.
- 2.4.4 While reasonable efforts will be made to ensure continuous electric power supply, interruptions cannot be ruled out and no claim from the Contractor shall be entertained on this account such as idle labor, extension of time etc. The Contractor shall adjust his working shift accordingly and deploy additional manpower, if necessary, so as to achieve the target.
- 2.4.5 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.
- 2.4.6 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.
- 2.4.7 Contractor to note that till construction power is made available by BHEL/ONGC, contractor shall make his own arrangement like DG set

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etc. The contractor shall also take the approval / permission of Gujarat State statutory authorities for his DG set installation.

- 2.4.8 Contractor is advised to maintain the calibrated energy measuring instruments and use their system as efficiently as possible to maintain the HT side input energy meter reading and LT side outgoing energy meter reading to sub-contractors as equal.
- 2.4.9 Any taxes, duties, levies, cess, etc as being charged / levied by ONGC / state statutory authority shall be passed on to the sub-contractors proportionately in the respective calendar month bill.
- 2.4.10 **Construction and Potable water shall be made available on chargeable basis at the rate of Rs. 9.00/- per Cum** at a single at a distance of 500M from the site point within battery limit which is to be further distributed by contractor. No additional payment shall be made on account of this.

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

2.5.1 General Notes:

- a. All steel like structural steel, reinforcement bars, MS bars, earthing rod / GI flats, MS gratings, foundations bolts, **except GI Handrails and Rails / Guide Rails** as specified in relevant BOQ and shall be issued free of cost by BHEL for use in the work covered in this contract from BHEL stores/storage yard. The contractor shall collect these materials from BHEL stores/store yard at specified places at his own cost and store the same at the work site or in his stores as per standard norms. Materials issued will be used only for construction of permanent works. **Procurement, supply, fabrication erection and painting of GI Handrails and Rails / Guide Rails are in contractor scope.**
- b. BHEL reserves the right to recover from the contractor any loss arising out of damage/ theft or any other causes or during verification/stacking or at any time under the custody of the contractor.
- c. The contractor shall take care of material issued by BHEL and shall protect the same from damage and weathering. Contractor shall construct waterproof cement store (**capacity minimum 250 MT / 5000 Bags**) for storing and stacking of cement.

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- 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.
- 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.

2.6 HANDLING OF MATERIALS ISSUED BY BHEL:

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

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

2.6.2 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.

2.6.3 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.**

2.7 ISSUE OF STEEL.

2.7.1 The steel shall be issued to the contractor on the following basis:

- a. **Structural Steel:** Weighment basis (Unit – MT)
- b. **Reinforcement Steel and Earthing Rod:** Weighment basis (Unit-MT)
- c. **MS Gratings:** Weighment Basis (Unit – MT / as received from manufacturer)

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2.7.2 All the steel (structural, reinforcement, earthing rod / GI flats, MS gratings, foundation bolts) 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.

Sl. 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.

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

2.7.4 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.

2.7.5 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.

2.7.6 The contractor shall submit to BHEL, a statement indicating estimated quantity of **steel** required during a quarter. In addition, the contractor shall also furnish the estimated requirement of steel during a month by the third week of the previous month indicating his requirement.

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2.7.7 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
1	Reinforcement steel, earthing rod /GI flat, MS grating	ONE MONTH
2	Structural Steel	ONE MONTH

2.7.8 Bidders shall ensure that no lamination material is taken over by them from BHEL.

2.7.9 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.

2.8 RETURN OF MATERIALS

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

2.8.2 **Scrap and Serviceable Materials:**

- a. 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.
- b. 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.

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- c. 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.
- d. 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.

2.9 Steel Consumption and wastage:

2.9.1 Reinforcement Steel, MS earthing rod and MS gratings 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.

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

2.9.2 Reinforcement Steel, MS earthing rod and MS gratings Wastage

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

Wastage and scrap shall be as per actual weightment basis.		
Sl. no.	Reinforcement steel & MS earthing Rod	Basis of issue & penal recovery

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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

2.9.3 **Structural Steel (Rolled Sections and Plates etc.) Consumption**

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

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

2.9.4 **Structural Steel Wastage**

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

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 & drawing.	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

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2.10 Reconciliation of Materials:

- 2.10.1 The contractor shall submit a reconciliation statement of steel issued to the contractor with each RA Bill.
- 2.10.2 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.
- 2.10.3 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.
- 2.10.4 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.

2.11 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.	Item	Penal rate (Rs)
P-2	Reinforcement steel and MS earthing rod/GI flat / MS Gratings	55,000 per MT
P-3	Chequered Plates and MS plates	60,000 per MT
P-4	MS Flats, beams, Channel, angles etc. (Rolled Sections)	60,000 per MT

2.12 Procurement and Testing of Materials by Contractor:

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

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made on this account. For this purpose, sample shall be collected at site in presence of **BHEL/ONGC** representative.

2.13 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/ONGC**. For this, contractor shall either establish their own field quality lab or have tie-up with approved lab by BHEL in/outside of the plant.

2.14 PROCUREMENT OF MATERIALS BY SUCCESSFUL CONTRACTORS AND TESTING:

Material required for the entire job (other than issued by BHEL as explained above) like cement, sand, aggregates, windows, doors, ventilators, rolling shutter, sanitary fixtures, painting & finishing material, stop-log gates, travelling screen, electrical fittings and wiring material and all other material required for the completion of entire scope, bolts & nuts, HSEFG/HT bolts have to be arranged by the contractor, except those specifically indicated as BHEL scope of supply. BHEL reserves the right to reject any material not found satisfactory.

Contractor shall produce manufacturer's test certificate (**MTC**) for cement for every batch of manufacturing along with each consignment brought to the site. Cement shall be procured from fresh stock only. Apart from the above, it shall be the responsibility of contractor to get the testing of cement, or any other materials procured from outside laboratory approved by **BHEL / ONGC** to ascertain the quality if insisted by **BHEL/BHEL's customer**.

Rate quoted shall be inclusive of all such contingencies and no additional payment shall be made on this account. For this purpose, sample shall be collected at site in presence of **BHEL / ONGC** representative.

Bidders are requested to specifically note the following:

THE WORK IS TO BE CARRIED OUT INSIDE THE FACTORY PREMISES OF ONGC. STRINGENT SAFETY NORMS ARE TO BE FOLLOWED INSIDE THE PLANT PREMISES. CONTRACTOR SHALL ABIDE BY THE SAFETY / SECURITY RULES AND REGULATIONS AS PER THE REQUIREMENT OF

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ONGC / BHEL. CONTRACTOR SHALL OBTAIN INFORMATION ABOUT ALL SAFETY / SECURITY NORMS OF THE LAW/AUTHORITY/FACTORY INSPECTORATE / OWNER/OWNER'S REPRESENTATIVE /BHEL WELL IN ADVANCE. BHEL WILL NOT ADMIT ANY CLAIMS WHATSOEVER ON ACCOUNT OF CONTRACTOR'S NON-FAMILIARIZATION OF SITE SAFETY / SECURITY REGULATIONS.

ALL THE VEHICLES ENTERING THE BATTERY LIMIT OF PLANT PREMISES ARE TO BE EQUIPPED WITH FLAME ARRESTORS/ MUFFLER. DURING EXECUTION OF ANY JOB INSIDE THE ONGC PLANT PREMISES IT IS COMPULSORY FOR ALL AGENCIES TO BE WELL EQUIPPED WITH FIREFIGHTING EQUIPMENTS. SO CONTRACTOR HAS TO ARRANGE ALL FIREFIGHTING EQUIPMENTS WITH TRAINED MANPOWER TO OPERATE THE SAME. NO SEPARATE PAYMENT SHALL BE MADE BY BHEL FOR ANY SAFETY / SECURITY ARRANGEMENTS.

DAILY WORK PERMIT WILL REQUIRED FOR STARTING OF WORK AND SAME HAS TO BE OBTAINED FROM ONGC BY CONTRACTOR. MEDICAL REPORT AND POLICE VERIFICATION REPORTS ARE MUST FOR OBTAINING GATE PASSES.

CONTRACTOR SHALL OBSERVE NATIONAL AND LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS PERTAINING TO THE WORKS AND SHALL BE RESPONSIBLE FOR EXTRA COSTS ARISING FROM VIOLATIONS OF SAME.

Bidders are requested to have **pre-bid visit / inspection of site** to make them fully acquainted with the site situation & nature of job. No claim shall be entertained at later date on account of non-familiarization of site condition. Bidders may fix up their site visit in consultation with construction manager BHEL site office ONGC, HAZIRA. Name, address & contact point of site is as below:

Shri Satish Kumar BHEL Site Office: 1x51 MW ONGC Hazira Surat, Gujarat Email: satishk@bhelpswr.co.in Ph No: +919979844610	Shri R. K. Vachak BHEL PSWR Nagpur Email: rkvachak@bhelpswr.co.in Ph No: +91
Shri Tarak Nath Choudhury BHEL Site Office: 1x51 MW ONGC Hazira Surat, Gujarat Email: tarak@bhelpswr.co.in Ph No: +918980048999	Shri G. A. Waghulkar BHEL PSWR Nagpur Email: gajendra@bhelpswr.co.in Ph No: +919977001802

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Sl. No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.1	ESTABLISHMENT			
3.1.1	FOR CONSTRUCTION PURPOSE:			
a	Open space for office (as per availability)	Yes		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 PURPOSES OF THE BIDDER			
a	Open space for labor colony (as per availability)		Yes	Contractor has to make his own arrangements for space, shelter and transportation of labours as per their requirement.
b	Labors Colony with internal roads, sanitation, complying with statutory requirements		Yes	
3.2.0	ELECTRICITY			

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Sl. No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
	PART I			
3.2.1	Electricity for construction purposes 3 Phase 415/440 V (To be specified whether chargeable or free)			
a	Single point source	Yes		Shall be provided by BHEL/ONGC Chargeable @ Rs. 5.00/KWH cost. Pl. refers clause no. 2.0.2 in this regard.
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.2.2	Electricity for the office, stores, canteen etc of the bidder			
a	Single point source	Yes		
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.2.3	Electricity for living accommodation of the bidder's staff, engineers, supervisors etc		Yes	Contractor has to make his own arrangement.
a	Single point source		Yes	
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.3.0	WATER SUPPLY			
3.3.1	For construction purposes: (to be specified whether chargeable or free)			

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Sl. No	Description PART I	Scope / to be taken care by		Remarks
		BHEL	Bidder	
a	Making the water available at single point	Yes		Shall be provided by BHEL/ONGC which shall be chargeable at the rate of Rs. 9.00/ CuM
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.2	Water supply for bidder's office, stores, canteen etc			
a	Making the water available at single point	Yes		
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.3	Water supply for Living Purpose			Contractor has to make his own arrangement.
a	Making the water available at single point		Yes	
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.4.0	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	Contractor has to make his own arrangement.
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	Contractor has to make his own arrangement.

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Sl. No	Description PART I	Scope / to be taken care by		Remarks
		BHEL	Bidder	
c	Providing the necessary consumables like bulbs, switches, etc during the course of project work		Yes	Contractor has to make his own arrangement.
d	Lighting for the living purposes of the bidder at the colony / quarters		Yes	
3.5.0	COMMUNICATION FACILITIES FOR SITE OPERATIONS OF THE BIDDER			
a	Téléphone, fax, internet, intranet, e-mail etc		Yes	
3.6.0	COMPRESSED AIR wherever required for the work		Yes	
3.7.0	Demobilization of all the above facilities		YES	
3.8.0	TRANSPORTATION			
a	For site personnel of the bidder		Yes	
b	For bidder's equipments and consumables (T&P, Consumables etc)		Yes	

Sl. No	Description PART II	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.9.1	3.9.0 ERECTION FACILITIES Engineering works for construction:			

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – III: Facilities in the scope of contractor/BHEL (SCOPE MATRIX)

Sl. No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
	PART II 3.9.0 ERECTION FACILITIES			
a	Providing the erection/constructions drawings for all the equipments covered under this scope	Yes		For Details Pl refer Chapter-IX-
b	Drawings for construction methods	Yes	Yes	In consultation with BHEL
c	As-built drawings – where ever deviations observed and executed and also based on the decisions taken at site- example – routing of small bore pipes		Yes	Changes are to be marked in drawing & handover to BHEL on completion of work.
d	Shipping lists etc for reference and planning the activities			NOT APPLICABLE
e	Preparation of site erection schedules and other input requirements		Yes	In consultation with BHEL
f	Review of performance and revision of site erection schedules in order to achieve the end dates and other commitments	Yes	Yes	In consultation with BHEL
g	Weekly erection schedules based on Sl No. e		Yes	In consultation with BHEL
h	Daily erection / work plan based on Sl No. g		Yes	In consultation with BHEL
i	Periodic visit of the senior official of the bidder to site to review the progress so that works are completed as per schedule. It is suggested this review by the senior official of the bidder should be done once in every two months.		Yes	
j	Preparation of preassembly bay			NOT APPLICABLE

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – III: Facilities in the scope of contractor/BHEL (SCOPE MATRIX)

Sl. No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
	PART II 3.9.0 ERECTION FACILITIES			
k	Laying of racks for gantry crane if provided by BHEL or brought by the contractor/bidder himself			NOT APPLICABLE
L	Arranging the materials required for preassembly			NOT APPLICABLE

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

4.1 TOOL & PLANTS

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

(A) T&Ps for Structural Works:

SL. No.	DESCRIPTION OF T&P	QUANTITY
1.	18 T Crawler crane	As per requirement
2.	Hydra (8 / 10 T Cap.)	02 Nos.
3.	Radial drill machine	03 Nos.
4.	Welding Rectifier	03 Nos.
5.	Welding m/c	05 Nos.
6.	Grinding machine	05 Nos.
7.	Portable diesel welding M/C	01 No.
8.	Hand cutting set	06 Nos.
9.	Hydraulic jack of different capacity	08 Nos.
10.	Stationery oven	02 Nos.
11.	Portable oven	04 Nos.
12.	DG set of 250/160KVA	As per requirement
13.	15t/20t tractor & trailer	01 No.
14.	Air compressor of required capacity for shot blasting	01 No.
15.	Ultrasonography testing M/c for str. Steel	As per requirement
16.	Radiography sources	As per requirement
17.	Fabrication Bed	02 Nos.

(B) T&Ps for Civil Works:

SL. No.	DESCRIPTION OF T&P	QUANTITY
1.	Concrete Batching Plant (30 Cum / Hrs)	01 No.
2.	Conventional Concrete Mixer Machine	02 Nos.
3.	Concrete Pump (15 Cum / Hrs Minimum Capacity and Lift up to 50m)	02 Nos.
4.	Concrete Transit Mixer	03 Nos.
5.	Electrical Winch of required Capacity	03 Nos.
6.	Vibrators (Electrical / Diesel)	10 Nos.
7.	Air Compressor/ Air Blowers	As per requirement
8.	Jack Hammer	02 Nos.
9.	Wagon Drill Machine	02 Nos.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

10.	Hydraulic Piling Rigs	As per requirement
11.	Self-priming Dewatering pump of various capacity (Diesel/Electric) From 3 HP to 25 HP	04 Nos.
12.	Curing / dewatering pump – 1.5 / 2 HP	02 Nos.
13.	Hydraulic Excavator / Poclain	01 No.
14.	JCB	02 Nos.
15.	<ul style="list-style-type: none"> • Ply Shuttering board with adequate supporting structure – (Old steel shuttering plates will not be allowed). • Steel shuttering (fare face) 	Lot (As per requirement)
16.	Pipe Scaffolding, Clamps / Swivel Couplers (One/Two Way), Props, Jacks, Screw Nos, MS Pipes, Wooden Battens, Planks, Bullies, H Frames, Tie Rods with Nuts, Adjustable Acro Span (Considering Individual Areas)	As per requirement
17.	Dumper / Tipper	05 Nos.
18.	Reinforcement bending machine	02 Nos.
19.	Reinforcement cutting machine	02 Nos.
20.	MS scaffolding pipe with matching Couplers	6000 RM
21.	Power Driven Earth Rammer	02 Nos.
22.	Road Roller / Vibro Roller	As per requirement
23.	Total Station	01 No.
24.	Auto Level and Staff	02 Nos.
25.	Water Tanker	01 No.
26.	All equipment for area lighting like Halogen bulbs and Portable Light Towers etc for General Area Illumination	As per requirement
27.	COMPUTER with printing/photocopying & CD writing facility	5 sets
28.	Communication Facilities – Landline, WLL, Mobile, Fax, etc.	As per requirement

(C) Civil Works – Field Quality Lab Equipment:

SL. No.	DESCRIPTION OF T&P	QUANTITY
1.	Automatic compression testing machine (2000 KN)	01 No.
2.	Cube Moulds (150mm size)	36 Nos.
3.	Slump cone with tamping rod	02 Nos.
4.	Sieves of different sizes for fine & coarse aggregate testing	01 Set

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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

5.	Core cutter test apparatus	05 Sets
6.	Oven (capacity 120ltr, range – 250c)	01 No.
7.	Moisture container (steel / aluminum)	04 Nos.
8.	Rapid moisture meter	02 Nos.
9.	Vicat apparatus with plungers for cement testing	01 Set
10.	Cube moulds (70mm size)	06 Nos.
11.	Physical balance	02 Nos.
12.	Automatic vibration machine	01 No.
13.	Jars	04 Nos.

4.2 MEASURING AND MONITORING DEVICES (MMD):

TO BE FINALIZED AT SITE AS PER REQUIREMENT.

NOTE:

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

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – V: T&Ps and MMEs to be deployed by BHEL on sharing basis

5.1 CRANES:

BHEL will provide the following listed crane on sharing basis for the purpose indicated against the respective crane:

SL No.	DESCRIPTION & CAPACITY	QUANTITY	PURPOSE
1.	75 T CAPACITY CRAWLER CRANE	1	Handling at erection site and Erection at higher elevations and heavier objects of structures of power house (TG Hall), De-aerator, Switchgear Building etc.

Bidders shall note that allotment (sharing arrangement) of the above Crane will be done by BHEL with due consideration of priority of the project activity. Contractor shall have to submit to BHEL his requirement of crane well in advance to ensure smooth execution of work.

Contractor shall provide fuel, operating crew, preventive/routine maintenance during his work as a part of the scope. In case BHEL provides the cranes through BHEL's hiring agencies, the aforesaid responsibilities EXCEPT THE FUEL (which will remain in contractor's scope) will be arranged by the hiring agency and BHEL will recover Rs 10000/- (Ten thousand only) per month (30 days x 8 Hrs per day) on pro-rata basis or part thereof towards this services. Contractors shall also provide necessary manpower assistance and T & P for assembly & dismantling of Boom, Jib and any other attachment of the cranes as deemed necessary for the project work. Contractor shall lay necessary sleeper beds, backfilling of approaches wherever necessary for safe movement of the cranes as directed by BHEL.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VI: Time Schedule

6.1 TIME SCHEDULE & MOBILIZATION

6.1.1 INITIAL MOBILIZATION AND TENTATIVE SCHEDULE

Contractor shall reach site, make his site establishment and be ready to commence the work **within two weeks from the date of fax Letter of Intent** or as per directions of Construction Manager/ Project Manager of BHEL.

The contractor has to subsequently augment his resources in such a manner that the entire works are completed within the contract period of **14 (Fourteen) months** in a manner required by BHEL to match with the project schedule.

6.1.2 CONTRACT PERIOD AND SCHEDULE FOR COMPLETION

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

Schedule of completion - Civil Works

S. No.	Activity	Date of completion Assuming DOS: 01/11/2015
1.	Piling completion	Jan 2016
2.	Readiness of HRSG and steel stack foundation	Apr 2016
3.	Readiness of GT AND GTG foundations	Apr 2016
4.	Readiness of BYPASS STACK foundation	Apr 2016
5.	GTG Hall	May 2016
6.	Readiness of other major equipment foundation and Auxiliary foundations	Sep 2016
7.	Readiness of Main control building (Elec. Building) and all Auxiliary building	Sep 2016
8.	Readiness of CW PUMP house/ SHED including Feed pool, fore-bay.	Sep 2016
9.	Readiness of transformer foundations, Firewalls etc. and Pipe/ Cable rack foundations	Oct 2016
10.	Miscellaneous Job like cable trench, Pipe Trench , Civil works Related To Fire Fighting, paving, roads, sewage systems, earthing & earthing pits etc	End of 14 th month in gradual manner as per plant commissioning program.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VI: Time Schedule

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.

Note:

- **Agency should note that the construction works for GTG, HRSGs along with its auxiliaries shall have to go in parallel to match with the commissioning schedule of the plant. For this it will necessary to deploy “Dedicated Resources” like Manpower, Machineries and Materials Area wise to execute the woks simultaneously.**
- **Bidders are requested to submit Resource deployment plan Area wise with detail program in line with above schedule in the form of Bar Chart / MS project planer along with their offer.**

6.1.3 IN ORDER TO MEET ABOVE SCHEDULE AND OTHER INTERMEDIATE TARGETS/ACTIVITIES AS SET BY BHEL ENGINEER IN CHARGE AT SITE & TO MEET CUSTOMER REQUIREMENTS / PROJECT SCHEDULE, CONTRACTOR SHALL ARRANGE ALL NECESSARY RESOURCES AND WORK FORCE IN CONSULTATION WITH BHEL ENGINEER AT SITE TO UNDERTAKE WORKS CONCURRENTLY IN ALL POSSIBLE FRONTS AS MADE AVAILABLE TO CONTRACTOR.

6.1.4 CONTRACTOR SHALL NOTE THAT INDIVIDUAL MILESTONES AS ABOVE SHALL BE ACHIEVED AS PER SCHEDULE FURNISHED ABOVE. THE DATE OF START OF FIRST EXCAVATION SHALL BE RECKONED AS THE START OF CONTRACT PERIOD FOR THIS PURPOSE.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VII: TERMS OF PAYMENT

7.1 TERMS OF PAYMENT

- 7.1.1 The contractor shall submit his monthly on account bills with all the details required by BHEL on specified date every month covering progress of work in all respects and areas from the 25th of previous calendar month to 24th of the current month.
- 7.1.2 General conditions of contract shall be referred to as regards mode of payment, and measurement of the work completed.
- 7.1.3 Release of payment in each running bill will be restricted to **95% of the value of work admitted**, as per the percentage break-up for the stage of work completion stipulated vide clauses hereinafter.

The 5% retention amount shall be released as per GCC clause no. 2.22. The workmanship guarantee period for this contract shall be **12 months from the date of completion** of entire work as certified by BHEL.

- 7.1.4 The payment for running bills will normally be released within around 30 days of submission of running bill with measurement sheets. Contractor shall make his own arrangement for making payment of impending labor wages and other dues in the meanwhile.
- 7.1.5 **BHEL** will release payment through **Electronic Fund Transfer (EFT)/RTGS**. In order to implement this system, the following details are to be furnished by the contractor pertaining to his bank accounts where proceeds will be transferred through **BHEL's banker**:

Name of the Company
Name of Bank
Name of Bank Branch
City/Place
Account Number
Account type
IFSC code of the Bank Branch
MICR Code of the Bank Branch

BHEL May Also Choose To Release Payment By Other Alternative Modes As Suitable.

7.1.6 Progressive Payment For Civil

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VII: TERMS OF PAYMENT

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. Few points of consideration are as below:

- The measurements sheets of work done in a month shall be submitted in triplicate duly agreed/signed by BHEL Engineer. The contractor shall extend all necessary assistance for verification of measurements of works without any extra cost.
- The RA bill payments are interim payments and shall be submitted in prescribed formats.
- Recoveries on account of electricity, water, statutory deductions etc shall be made as per terms of contract.
- 100% of item rate on pro rata basis shall be made monthly as per progress of work. BHEL decision in this regard shall be final and binding on the contractor.
- Final bill shall be submitted after completion of works and upon material reconciliation along with all prescribed formats. The percentage of payment for progressive completion of work in various categories of work shall be as under:

7.1.7 Extra/Additional Items of Work:-

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

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VIII: TAXES AND DUTIES

8.0 TAXES, DUTIES, LEVIES (Consolidated Rev 05 dated 13/08/2015)

8.1. For All types of works excepting works covered under sl no 8.2

8.1.1

The contractor shall pay all (save the specific exclusions as enumerated in this contract) taxes, fees, license charges, deposits, duties, tools, royalty, commissions or other charges which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit.

However, provisions regarding Service Tax and Value Added Tax (VAT) on output services and goods shall be as per following clauses.

8.1.2 Service Tax & Cess on Service Tax

Contractor's price/rates shall be exclusive of Service Tax and Cess on Services. In case, it becomes mandatory for the contractor under provisions of relevant act/law to collect the Service Tax & Cess from BHEL and pay the same to the concerned tax authorities, such applicable amount will be paid by BHEL at the prevailing Service Tax Rate (presently 12.36 %) on the admitted bill value.

Contractor shall submit to BHEL documentary evidence of Service Tax registration certificate specifying name of services covered under this contract. Contractor shall submit serially numbered Service Tax and Cess Invoice, signed by him or a person authorized by him in respect of taxable service provided, and shall contain the following, namely,

- 1. The name, address and the registration number of the contractor,**
- 2. The name and address of the party receiving taxable service,**
- 3. Description, classification and value of taxable service provided and,**
- 4. The service tax payable thereon.**

All the Four conditions shall be fulfilled in the invoice before release of service tax payment.

Wherever, more than one route/option are available for discharge of service tax liability under a particular service, (e.g. "works contract Service"), contractor shall obtain prior written consent from BHEL site before billing the amount towards Service Tax.

8.1.3 VAT (Sales Tax /WCT)

As regards Value Added Tax (VAT)/CST on transfer of property in goods involved in Works Contract (previously known as Works Contract Tax) applicable as per local laws, the price quoted by the contractor shall be inclusive of the same and in no case input or output VAT/CST will be reimbursed extra.

In any case the Contractor shall register himself with the respective Sales Tax authorities of the state and submit proof of such registration to BHEL along with the first RA bill. Contractor will submit all the details of VAT/CST paid for the contract in

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VIII: TAXES AND DUTIES

the prescribed format of the respective state VAT laws. Also, the contractor will issue the tax Invoices to BHEL as per the Tax laws of respective state on monthly basis. Contractor shall also be required to furnish to BHEL necessary proof of VAT remittance on monthly basis.

Deduction of tax at source shall be made as per the provisions of law and is to be construed as an advance tax paid by the contractor and no reimbursement thereof will be made.

Further, if BHEL, at the instance of customer or otherwise adopts the specific route for discharging output VAT liability itself, benefit of the reduction in liability of the contractor will be passed on to BHEL.

In case, BHEL is forced to pay any VAT liability on behalf of contractor, the same will be recovered from contractor's bill or otherwise as deemed fit

8.2 — 'Enabling Works'

~~The contractor shall pay all (save the specific exclusions as enumerated in this contract) taxes, fees, license charges, deposits, duties, tools, royalty, commissions or other charges which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit. (~~
i.e. rates quoted by bidder shall be inclusive of Service Tax, VAT/WCT and all other taxes and duties including new levies/taxes/duty if any)

~~However, Since the proposed work is in the nature of 'Works Contract service' as per Service tax law, Hence, For non corporate contractors being Individual, HUF, Proprietary Firm, Partnership Firm or Association of Persons (AOP), BHEL shall recover the applicable Service Tax under reverse charge mechanism from the contractor and remit the same with the Government as per the provisions of Law. Necessary advice/confirmation of remittance shall be issued to the contractor. The contractor shall not be eligible for any refund/reimbursement of such service tax from BHEL. It shall be the responsibility of the contractor to submit proper invoice giving all the requisite details as per Service Tax Law for the determination of the service tax liability of BHEL under reverse charge mechanism. BHEL reserves the right to determine such liability based on the invoice submitted by the contractor or otherwise independently and remittance of the same with the Government.~~

8.3 New Taxes/Levies - For All types of works excepting works covered under sl no 8.2

In case the Government imposes any new levy/tax on the output service/ goods/work after award of the contract, the same shall be reimbursed by BHEL at actual.

In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer, the Bidder/Contractor must convey its impact on his price duly substantiated by documentary evidence in support of the same **before opening of Price Bid**. Claim for

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VIII: TAXES AND DUTIES

any such impact after opening the Price Bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

No reimbursement/recovery on account of increase/reduction in the rate of taxes, levies, duties etc. on input goods/services/work shall be made. Such impact shall be taken care of by the Price Variation/Adjustment Clause (PVC) if any. In case PVC is not applicable for the contract, Bidder has to make his own assessment of the impact of future variation if any, in rates of taxes/duties/ levies etc. in his price bid.

8.4 BOCW Cess - For All types of works excepting works covered under sl no 8.2

The quoted rates shall be exclusive of the BOCW Cess which, if applicable, shall be paid extra by BHEL against Documentary evidence. However, the applicability of the BOCW Cess shall be got confirmed from BHEL in writing, before remitting such Cess/tax.

8.5 GST: For All types of works excepting works covered under sl no 8.2

As and when GST becomes applicable to this contract, the net differential (negative or positive) financial liability of the bidder to the Authorities (as compared to such liability prior to applicability of GST), if any, shall be to the account of BHEL. For this purpose, all available options under the GST shall be explored, and the decision of BHEL in this regard shall be final and binding on the bidder.

SPECIAL CONDITIONS OF CONTRACT (SCC)

CHAPTER IX –DRAWINGS

9.1 Following Drawings are enclosed and shall be the integral part of this tender.

➤ **Drawings Given by Customer / BHEL PED Hyderabad.**

SL. NO	TITLE	DRAWING NO.	REV
1.	PLOT PLAN/PROPOSED SITE FOR GT BASE C.P.P	HP/PD/GT/001	R0
2.	SOAK PIT DETAILS	3-38144-00003	R0
3.	DETAILS OF ALUMINIUM PARTTIONS	3-38144-00008	R0
4.	SEPTIC TANK (25 USERS)	3-38144-00009	R0
5.	STANDARD DETAIL OF ANTI TERMITE TREATMENT	4-38144-00004	R0
6.	PIPE ELECTRODE	GT 57191(P-11/37)	R0
7.	EARTH ELECRODE IN TEST PIT	GT 57191(P-10/37)	R0
8.	WOODEN FLUSH DOOR DRAWING FROM EIL	7-75-0011	REV3
9.	DETAILS OF BARRICADING	BHE/PW/OY-11	R0

NOTE: These tender drawings are not hosted in our web site. These drawings shall be available in our office at Nagpur in Hard Copy. Bidders can collect these drawings while purchasing tender specification.

SPECIAL CONDITIONS OF CONTRACT (SCC)

CHAPTER X –APPENDIX

10.1 Tentative Manpower Requirement

1. Project manager – with adequate experience in Industrial Foundation, Building & Structural Works, Power Plant Civil & Structural Works - 1 Head
2. Experienced Civil Engineers – 5 Heads
3. Experienced Foreman / Supervisors - 5 Heads
4. Planning & Billing Engineer – 01 Heads
5. Stores, Gate Pass – 02 Heads
6. Accounts & Administration- 01 No.
7. Quality Control Engineer – 01 Head
8. Safety Engineer – 01 No.
9. Surveyor – 02 Head capable to handle total station
10. Operator, Licensed Electrician, Mechanic - As per requirement
11. Experienced Carpenters & Helpers – lot for similar nature of work
12. Experienced Bar Benders & Helpers – lot for similar nature of work
13. Security Guards (Round The Clock) – As per requirement

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER XI –
BILL OF QUANTITY AND % WEIGHTAGES FOR ITEM RATES W.R.T
TOTAL LUMP SUM PRICE

This Chapter consists of Part B of Volume II Price bid:

1. 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 Specification)

Note: This Chapter-XI is uploaded as file titled **_Chapter XI BOQ and Percentage"-1532**