

# **TENDER SPECIFICATION**

**NO: BHE/PW/PUR/KHARGONE-GEO/1324**

**GEO- TECHNICAL INVESTIGATION AND TOPOGRAPHICAL  
SURVEY**

**AT**

**2X660 MW NTPC KHARGAON STPP**

**IN**

**MADHYA PRADESH**

**TECHNICAL BID- 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**



**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 <u>Vol-IA-1324</u> )
NIL	Notice Inviting Tender	(Part of <u>Vol-IA-1324</u> )
I-A	Technical Conditions of Contract	Vol-IA-1324
I-B	Special Conditions of Contract	Vol-IBCD-1324
I-C	General Conditions of Contract	(Part of <u>Vol-IBCD-1324</u> )
I-D	Forms & Procedures	(Part of <u>Vol-IBCD-1324</u> )
I-E	STANDARD SPECIFICATIONM FORGEOTECHNICAL INVESTIGATION	(Part of <u>Vol-IA-1324</u> )
II	Price Bid Specification	Vol II

**TENDER SPECIFICATION**  
**NO: BHE/PW/PUR/KHARGONE-GEO/1324**

**GEO- TECHNICAL INVESTIGATION AND TOPOGRAPHICAL SURVEY**

**AT**

**2X660 MW NTPC KHARGAON STPP**

**IN**

**MADHYA PRADESH**

EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

LAST DATE FOR                      Refer Notice Inviting Tender  
TENDER SUBMISSION:

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING VOLUME-I-Tech Bid, VOL-I-E-STANDARD SPECIFICATIONM FORGEOTECHNICAL INVESTIGATION, Vol I BCD Rev 00 AND VOLUME- II-Price Bid ARE ISSUED TO:

M/s. ....

.....

PLEASE NOTE:  
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

AGM (Purchase)  
Place: Nagpur  
Date:

1324

# NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



**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/KHARGONE-GEO/1324	
ii	Broad Scope of job	GEO- TECHNICAL INVESTIGATION AND TOPOGRAPHICAL SURVEY AT 2X660 MW NTPC KHARGAON STPP IN MADHYA PRADESH	
iii	DETAILS OF TENDER DOCUMENT		
a	Volume-IA	<i>Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc</i>	<i>Applicable</i>
b	Volume-IB	<i>Special Conditions of Contract (SCC)</i>	<i>Applicable</i>
c	Volume-IC	<i>General Conditions of Contract (GCC)</i>	<i>Applicable</i>
d	Volume-ID	<i>Forms and Procedures</i>	
e	Volume-II	<i>Price Schedule (Absolute value).</i>	<i>Applicable</i>
iv	Issue of Tender Documents	<p><b>1. <u>Sale from BHEL PS Regional office at :</u></b> <b>Start : 06/10/2014, Time :</b> <b>Closes: 15/10/2014 , Time :16:00 Hrs</b></p> <p><b>2. From BHEL website (<a href="http://www.bhel.com">www.bhel.com</a>)</b> Tender documents will be available for downloading from website till due date of submission</p>	<i>Applicable/ Not applicable</i>
v	DUE DATE & TIME OF OFFER SUBMISSION	<p><b>Date : 16/10/2014 , Time : 15:00 Hrs</b> <b>Place : <u>BHEL PS Regional office at :Nagpur</u></b></p> <p>Tenders being submitted through representative shall be submitted at dispatch section of of PSWR HQ Office after making entry/registration at the reception. For any assistance on the matter kindly contact following officials: Pratish Gee Varghese/Sr Engineer(Purchase) Shivkesh Meena / Engineer (Purchase)</p>	<i>Applicable</i>
vi	OPENING OF TENDER	<b>1 hours after the latest due date and time of Offer submission</b>	<i>Applicable</i>

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		Notes: (1) In case the due date of opening of tender becomes a non-working day, then the due date & time of offer submission and opening of tenders get extended to the next working day. (2) Bidder may depute representative to witness the opening of tender	
vii	<b>EMD AMOUNT</b>	Rs 2,00,000/- (Rupees Two Lakhs Only)	Applicable
viii	<b>COST OF TENDER</b>	Rs 2000/- (Rupees Two thousand Only)	Applicable
ix	<b>LAST DATE FOR SEEKING CLARIFICATION</b>	Atleast 5 days before the due date of offer submission Along with soft version also, addressing to undersigned & to others as per contact address given below	Applicable
x	<b>SCHEDULE OF Pre Bid Discussion (PBD)</b>	Date :	Applicable/Not applicable.
xi	<b>INTEGRITY PACT &amp; DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)</b>		Applicable/Not Applicable
xii	<b>Latest updates</b>	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage ( <a href="http://www.bhel.com">www.bhel.com</a> -->Tender Notifications →View Corrigendums) <b>and not in the newspapers</b> . Bidders to keep themselves updated with all such information	

- 2.0 The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, duly signed & 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 superscribed envelopes (ENVELOPE-I & ENVELOPE-II)
  - PART-II (Price Bid) – in sealed and superscribed envelope (ENVELOPE-III)
  - One set of tender documents shall be retained by the bidder for their reference

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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
<b>Part-I A</b>		
	<b>ENVELOPE – I superscribed as :</b> PART-I (TECHNO COMMERCIAL BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:  <b>CONTAINING THE FOLLOWING:-</b>	
i.	Covering letter/Offer forwarding letter of Tenderer.	
ii.	Duly filled-in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above.  <b>Note:</b> <ol style="list-style-type: none"> <li>a. In case of any deviation, the same should be submitted separately for technical &amp; 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.</li> <li>b. BHEL reserves the right to accept/reject the deviations without assigning any reasons, and BHEL decision is final and binding.               <ol style="list-style-type: none"> <li>i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL</li> <li>ii). In case of unacceptable deviations, BHEL reserves the right to reject the tender</li> </ol> </li> </ol>	
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.	

<b>PART-I B</b>		
	<b>ENVELOPE – II superscribed as:</b> PART-I (EMD/COST of TENDER) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:	

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<b>CONTAINING THE FOLLOWING:-</b>	
i.	<p>1. Earnest Money Deposit (EMD) in the form as indicated in this Tender <b>OR</b> Documentary evidence for 'One Time EMD' with the Power Sector Region of BHEL floating the Tender</p> <p>2. Cost of Tender ( Demand Draft or copy of Cash Receipt as the case may be)</p>

<b>PART-II</b>	
<b>PRICE BID</b> consisting of the following shall be enclosed	
<b>ENVELOPE-III</b> superscribed as: PART-II (PRICE BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:	
<b>CONTAINING THE FOLLOWING</b>	
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)

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

**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: VOID**
- 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,

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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.
- 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 authorised representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders.
- 18.0 Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise.
- 19.0 BHEL reserves the right to decide the successful bidder on the basis of Reverse Auction process. In such case all qualified bidders will be intimated regarding procedure/ modality for Reverse Auction process prior to Reverse Auction and price will be decided as per the rules for Reverse Auction. .
- However, if reverse auction process is unsuccessful as defined in the RA rules/procedures, or for whatsoever reason, then the sealed 'PRICE BIDS' will be opened for deciding the successful bidder. BHEL's decision in this regard will be final and binding on bidder.
- 20.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
- 21.0 In case the bidder is an "Indian Agent of Foreign Principals", 'Agency agreement has to be submitted along with Bid, detailing the role of the agent along with the terms of payment for agency commission in INR, along with supporting documents.
- 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 'Stand alone' bidder cannot become a **'Prime Bidder' or a 'Consortium bidder' or 'Technical Tie up bidder' in a consortium (or Technical Tie up) bidding**. Prime bidder shall neither be a consortium partner to other prime bidder nor take any other consortium partners. However, consortium partner may enter into consortium agreement with other prime bidders. In case of non compliance, consortium bids of such Prime bidders will be rejected.
  - 23.3 Number of partners for a consortium Bidding (or Technical Tie up) shall be as specified in the PQR
  - 23.4 Prime Bidder shall be as specified in the Pre Qualification Requirement, else the bidder who has the major share of work
  - 23.5 In order to be qualified for the tender, Prime Bidder and Consortium partner or partners shall satisfy (i) the Technical 'Pre Qualifying Requirements' specified for the respective package, (ii) "Assessment of Capacity of Bidder" as specified in clause 9.0
  - 23.6 Prime Bidder shall comply with additional 'Technical' criteria of PQR as defined in 'Explanatory Notes for the PQR'
  - 23.7 Prime Bidder shall comply with all other Pre Qualifying criteria for the Tender unless otherwise specified
  - 23.8 In case customer approval is required, then Prime Bidder and Consortium Partner or partners shall have to be individually approved by Customer for being considered for the tender.
  - 23.9 Prime Bidder shall be responsible for the overall execution of the contract
  - 23.10 In case of award of job, Performance shall be evaluated for Prime Bidder and Consortium Partner or partners for their respective scope of work(s) as per prescribed formats
  - 23.11 In case the Consortium partner or partners back out, their SDs shall be encashed by BHEL. In such a case, other consortium partner or partners meeting the PQR have to be engaged by the Prime Bidder, and if not, the respective work will be withdrawn and executed on risk and cost basis of the Prime Bidder. The new consortium partner or partners shall submit fresh SDs as applicable.
  - 23.12 In case the prime Bidder withdraws, the whole contract shall be considered cancelled and short closed.
  - 23.13 After execution of work, the work experience shall be assigned to the Prime Bidder and the consortium partner or partners for their respective scope of work. After successful execution of two similar works with the same consortium partner or partners under direct orders of BHEL, the Prime Bidder shall be eligible for becoming a '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

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- 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 IMPORTANT INFORMATION
04. Other Tender documents as per this NIT.

**ANNEXURE - 1**

**PRE QUALIFYING REQUIREMENTS**

JOB	<b>GEO- TECHNICAL INVESTIGATION AND TOPOGRAPHICAL SURVEY AT 2X660 MW NTPC KHARGAON STPP IN MADHYA PRADESH</b>
TENDER NO	<b>BHE/PW/PUR/KHARGONE-GEO/1324</b>

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. <b>Bidder must fill up this column as per applicability</b>
A	Submission of Integrity Pact duly signed (if applicable) <small>(Note: To be submitted by Prime Bidder &amp; Consortium/Technical Tie up partner jointly in case Consortium bidding is permitted, otherwise by the sole bidder)</small>	NOT APPLICABLE	
B	<p><b><u>Technical</u></b> <b>Bidder shall essentially meets (B.1 and B.2) OR B.3 Qualifying Requirements (QR) as stated below.</b></p> <p><b>B.1:</b> Bidder should have successfully executed/completed Geo-Technical Investigation works during last seven years as on date of offer submission as below:</p> <p>B.1.1 Executed Geo-Technical Investigation Works of value not less than of <b>Rs 80 Lakhs</b> against single work order.</p> <p style="text-align: center;">OR</p> <p>B.1.2 Executed Two Geo-Technical Investigation Works of value not less than of <b>Rs 50 Lakhs</b> against maximum two work orders</p> <p style="text-align: center;">OR</p> <p>B.1.3 Executed Three Geo-Technical Investigation Works of value not less than of <b>Rs 40 Lakhs</b> against maximum three work orders</p> <p><b>B.2:</b> Bidder should have successfully executed/completed Topographical Survey works during last seven years as on date of offer submission as below:</p>	APPLICABLE	

	<p>B.2.1 Executed Topographical Survey works of value not less than of <b>Rs 24 Lakhs</b> against single work order.</p> <p style="text-align: center;">OR</p> <p>B.2.2 Executed Two Topographical Survey works of value not less than of <b>Rs 15 Lakhs</b> against maximum two work orders</p> <p style="text-align: center;">OR</p> <p>B.2.3 Executed Three Topographical Survey works of value not less than of <b>Rs 12 Lakhs</b> against maximum three work orders</p> <p><b>B.3:</b> Bidder should have successfully executed/completed Geo-Technical Investigation and Topographical Survey works during last seven years as on date of offer submission as below:</p> <p>B.3.1 Executed Geo-Technical Investigation and Topographical Survey works of value not less than of <b>Rs 104 Lakhs</b> against single work order.</p> <p style="text-align: center;">OR</p> <p>B.3.2 Executed Two Geo-Technical Investigation and Topographical Survey works of value not less than of <b>Rs 65 Lakhs</b> against maximum two work orders</p> <p style="text-align: center;">OR</p> <p>B.3.3 Executed Three Geo-Technical Investigation and Topographical Survey works of value not less than of <b>Rs 52 Lakhs</b> against maximum three work orders</p> <p><b>Note:</b> Bidder should have meets the PQR (B.1 and B.2) OR B.3.</p> <p>Relevant document in support of above shall be submitted.</p>		
C-1	<p><b><u>Financial</u></b> <b><u>TURNOVER</u></b></p> <p>Bidders must have achieved an average annual financial turnover (Audited) of <b>Rs 39 Lakhs</b> or more</p>	APPLICABLE	

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	over last three Financial Years (FY) i.e. 2011-2012, 2012-2013, 2013-14.		
C-2	<b>NETWORTH</b> (only in case of Companies) Net worth of the Bidder based on the latest Audited Accounts as furnished for 'C-1' above should be positive	APPLICABLE	
C-3	<b>PROFIT</b> 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.	APPLICABLE	
D	Assessment of Capacity of Bidder to execute the work as per sl no 9 of NIT (if applicable)	NOT APPLICABLE	By BHEL
E	Approval of Customer (if applicable)  <b>Note:</b> Names of bidders (including consortium/Technical Tie up partners in case consortium bidding is permitted) who stand qualified after compliance of criteria A to D shall be forwarded to customer for their approval.	NOT APPLICABLE	BY BHEL
F	Price Bid Opening <b>Note:</b> Price Bids of only those bidders shall be opened who stand qualified after compliance of criteria A to E		BY BHEL
G	Technical Tie up criteria (if applicable)	NOT APPLICABLE	
<p><b><u>Explanatory Notes for the PQR (unless otherwise specified in the PQR):</u></b></p> <ol style="list-style-type: none"> <li>Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated against C-1 above along with all annexures</li> <li>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.</li> <li>C-2:-NETWORTH : Shall be calculated based on the latest Audited Accounts as furnished for C-1 above. Net worth = Paid up share capital + Reserves. (Net worth is required to be evaluated in case of companies)</li> <li>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</li> <li><del>'Additional' Criteria in respect of 'Technical' criteria of PQR (as in 'B' above) for Civil, Electrical, CI, unless otherwise specified:-</del> <ol style="list-style-type: none"> <li><del>1. _____ Bidder should have executed similar work of any one of the following:           <ol style="list-style-type: none"> <li><del>a. _____ One (1) work of value not less than Rs XXX _____ OR</del></li> <li><del>b. _____ Two (2) works of not less than Rs YYY _____ OR</del></li> <li><del>c. _____ Three (3) works of not less than Rs ZZZ (Value XXX, YYY, ZZZ shall be as indicated by BHEL</del></li> </ol> </del></li> <li><del>2. _____ 'Similar' work for criteria 5 above means           <ol style="list-style-type: none"> <li><del>a. _____ Civil or Structures or Civil &amp; Structures or Chimney respectively as applicable to the tendered scope in respect of 'CIVIL' Works</del></li> <li><del>b. _____ Electrical works in respect of 'ELECTRICAL'</del></li> <li><del>c. _____ CI works in respect of 'CI' Works</del></li> <li><del>d. _____ Material Handling and/or Management works in respect of 'MM' works</del></li> </ol> </del></li> </ol> </li> </ol>			

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Notice Inviting Tender**

**Tender Specification No: BHE/PW/PUR/KHARGONE-GEO/1324**

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<p>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</p> <p>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</p> <p>8. <del>Unless otherwise specified, for the purpose of 'Technical' criteria of PQR (as in 'B' above), the word 'EXECUTED' means:</del></p> <ol style="list-style-type: none"><li>1. _____ "BOILER LIGHT UP" in respect of Boiler &amp; Aux and ESP</li><li>2. _____ "SYNCHRONISATION" in respect of STG/GTG and 'SPINNING' in case of HTG</li><li>3. _____ "STEAM BLOWING COMPLETION" in respect of at least Main Steam Line of Power Cycle Piping</li><li>4. _____ "HYDRAULIC TEST" of the system in respect of Structures, Pressure parts/IBR Piping</li><li>5. _____ "CHARGING" in respect of power Transformers, Bus ducts, HT/LT switchgears</li><li>6. _____ "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.</li><li>7. _____ Achievement of physical Quantities as per respective PQRs in respect of Civil &amp; Structures and Piling Works</li><li>8. _____ 'Readiness for coal Filling" in respect of Bunker Structure Work.</li></ol> <p>9. <del>Boiler means HRSG or WHRB or any other types of Steam Generator</del></p> <p>10. <del>Critical/Power Cycle piping means Main Steam, Hot Reheat, Cold Reheat, HP Bypass, LP Bypass lines</del></p> <p>11. <del>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.</del></p> <p>12. <del>In case the experience/POAWO certificate enclosed by bidders do not have separate break up prices for the E&amp;C portion of Electrical and CI Works, (i.e. the certificates enclosed are for composite order for supply and erection of Electrical &amp; CI and other works if any), then value of Erection and Commissioning for the Electrical &amp; CI portion shall be considered as 15% of the supply &amp; erection of Electrical &amp; CI, unless otherwise specifically indicated in the PQR.</del></p> <p>13. <del>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.</del></p> <p>14. <del>In case the tendered scope is not a Pulverised Fuel Boiler, experience of Oil/Gas Fired Boilers also can be considered unless otherwise specifically indicated in the PQR</del></p> <p>15. 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.</p>
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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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**ANNEXURE - 2**

**CHECK LIST**

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

1	Name and Address of the Tenderer		
2	Details about type of the Firm/Company		
3.a	Details of Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
3.b	Details of alternate Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
4	EMD DETAILS	DD No:                      Date : Bank :                      Amount: <u>Please tick ( ✓ ) whichever applicable:-</u> ONE TIME EMD / ONLY FOR THIS TENDER	
5	Validity of Offer	TO BE VALID FOR SIX MONTHS FROM DUE DATE	
		APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER
6	Whether the format for compliance with <b>PRE QUALIFICATION CRITERIA</b> (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format	Applicable	YES / NO
7	Audited profit and Loss Account for the last three years	Applicable/Not Applicable	YES/NO
8	Copy of 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	NO
11	Declaration by Authorised 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

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15	Non Disclosure Certificate	Applicable/ <del>Not Applicable</del>	YES/NO
16	Bank Account Details for E-Payment	Applicable/ <del>Not Applicable</del>	YES/NO
17	Capacity Evaluation of Bidder for current Tender	Applicable/ <del>Not Applicable</del>	YES/NO
18	Tie Ups/Consortium Agreement are submitted as per format	Applicable/ <del>Not Applicable</del>	YES/NO
19	Power of Attorney for Submission of Tender/Signing Contract Agreement	Applicable/ <del>Not Applicable</del>	YES/NO
20	Analysis of Unit rates	Applicable/ <del>Not Applicable</del>	YES/NO

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

**DATE :**

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

**ANNEXURE 3**

**IMPORTANT INFORMATION**

1. The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site ( [www.bhel.com](http://www.bhel.com) ---> Tender Notification -> List of Banned Firms )
2. All Statutory Requirements as applicable for this project shall be complied with.
3. This tender is floated based on the anticipated order from NTPC for the subject project. Tendering activity shall be processed upto the ordering stage. However order shall be issued only after confirmed order to BHEL by NTPC.
4. Please take note of following Revised Tender Clauses:
  - i. Notice Inviting Tender: SI 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**

**Price Variation Compensation Clause no. 2.17 of Vol I C GCC is Not Applicable:**

**7. OVER RUN COMPENSATION**

**OVER RUN COMPENSATION Clause no. 2.12 of Vol I C GCC is Not Applicable**

**8. Broad Terms & Conditions of Reverse Auction**

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

- 8.1. 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).
- 8.2. 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.
- 8.3. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- 8.4. 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.
- 8.5. 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.
- 8.6. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
- 8.7. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
- 8.8. 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.
- 8.9. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at “Total Cost to BHEL” like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for noncompliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
- 8.10. Reverse auction will be conducted on scheduled date & time.
- 8.11. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
- 8.12. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (Annexure VII) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
- 8.13. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL’s standard practice.

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- 8.14. Bidders shall be required to read the "Terms and Conditions" section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the "Business Rules of Reverse Auction", which will be communicated before the Reverse Auction.
- 8.15. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
- 8.16. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
- 8.17. In case BHEL decides to go for reverse auction, the H1 bidder (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.

Rev 00  
6<sup>th</sup>  
JULY

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHARAT HEAVY ELECTRICALS LIMITED



## TECHNICAL CONDITIONS OF CONTRACT (TCC) CONTENTS

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<b>SINo</b>	<b>DESCRIPTION</b>	<b>Chapter</b>	<b>No. OF PAGES</b>
<b>Volume-IA</b>	<b>Part-I: Contract specific details</b>		
1	Project Information	Chapter-I	1
2	Scope of Works and Technical Specifications	Chapter-II	1
3	Facilities in the scope of Contractor/BHEL (Scope Matrix)	Chapter-III	3
4	T&Ps and MMEs to be deployed by Contractor	Chapter-IV	2
5	T&Ps and MMEs to be deployed by BHEL on sharing basis	Chapter-V	1
6	Time Schedule	Chapter-VI	2
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9	Tender Drawings		

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - I: Project Information

<b>1.0</b>	<b>Project Information</b>
<b>1.1</b>	<p><b><u>INTRODUCTION</u></b></p> <p><b>Location :</b> Latitude 220 03' 25'' N to 220 04' 01'' N and Longitude 750 50'02'' E to 750 50' 38'' E near Selda &amp; Dalchi village in Khargaon district of Madhya Pradesh</p> <p><b>Nearest Railway Station:</b> Sanawad on Northern Central Railway and is about 30 Km away from site</p> <p><b>Nearest Airport:</b> Indore is about 105 Km from the site.</p> <p><b>Access By Road :</b> The site is about 30 Km away from Sanawad and is approachable from Sanawad on Indore – Khandwa State Highway through PWD road</p> <p><b>Major Towns/Cities:</b> Indore about 105 Km from Site.</p> <p><b>Land:</b> About 1334 Acres of land has been identified. 100% of the land is under NTPC possession and free from Encroachment.</p> <p><b>Source Of Coal:</b> It is to be transported from SECL coalfields to site (located about 890 Kms) through Indian Railway System.</p> <p><b>Source Of Water:</b> Narmada River is passing at approx. 15 Kms (North) from the site. Two dams of Narmada Hydro Development Corporation (NHDC) on river Narmada {Maheshwar Dam (North - West) &amp; Omkareshwar Dam (North East)} are located at distances of about 15 Kms and 45 Kms respectively.</p>

TECHNICAL CONDITIONS OF CONTRACT (TCC)  
Chapter - II : Scope of Works and Technical Specifications

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**2.0 Scope of Work**

CARRYING OUT GEO - TECHNICAL INVESTIGATION AND TOPOGRAPHICAL SURVEY FOR NTPC KHARGAON STPS IN MADHYA PRADESH.

The detailed scope of work is furnished in the following listed documents

- 1) **Technical Specification for Topographical Survey (Vol. IIB Section - D)**
- 2) **Technical Specification for Geotechnical Investigation (Vol. II Section – D)**
- 3) **Bill of Quantities (Vol. III)**

All the items in BOQ shall be read in conjunction with the relevant Technical Specification attached with this tender specification and work shall be carried out accordingly. All the report shall be submitted in the prescribed preform as mentioned in Technical specification including graphical representation, calculation, Log-sheets etc. & no extra claim shall be entertained on this account.

Agency has to get their Interim as well as final report approved by **BHEL PEM Noida** as well as from BHEL respective **Customer/Consultant**. Final report shall be submitted in sufficient copy (in hard as well in soft form) as described elsewhere in this tender specification. Quoted Rate shall be inclusive of all the above aspect.

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

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Sl.No.	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.1	<b>PART I ESTABLISHMENT</b>			
3.1.1	<b>FOR CONSTRUCTION PURPOSE:</b>			
a	Office		Yes	
b	Open space for storage (as per availability)		Yes	
c	Construction of bidder's office, canteen and storage building including supply of materials and other services		Yes	
d	Bidder's all office equipments, office / store / canteen consumables		Yes	
e	Canteen facilities for the bidder's staff, supervisors and engineers etc		Yes	
f	Fire fighting equipments like buckets, extinguishers etc		Yes	
g	Fencing of storage area, office, canteen etc of the bidder		Yes	
3.1.2	<b>FOR LIVING PURPOSES OF THE BIDDER</b>			
a	Open space for labour colony (as per availability)		Yes	
b	Labour Colony with internal roads, sanitation, complying with statutory requirements		Yes	
3.2.0	<b>ELECTRICITY</b>			
3.2.1	<b>Electricity for construction purposes 3 Phase 415/440 V (To be specified whether chargeable or free)</b>			
a	Single point source		Yes	
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.2.2	<b>Electricity for the office, stores, canteen etc of the bidder(to be specified whether chargeable or free)</b>			
a	Single point source		Yes	
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	

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

Sl.No.	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
	<b>PART I</b>			
c	Duties and deposits including statutory clearances if applicable		Yes	
3.2.3	<b>Electricity for living accommodation of the bidder's staff, engineers, supervisors etc</b>		Yes	
a	Single point source		Yes	
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.3.0	<b>WATER SUPPLY</b>			
3.3.1	<b>For construction purposes:(to be specified whether chargeable or free)</b>			
a	Making the water available at single point		Yes	.
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.2	<b><u>Water supply for bidder's office, stores, canteen etc</u></b>			
a	Making the water available at single point		Yes	.
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.3	<b><u>Water supply for Living Purpose</u></b>			.
a	Making the water available at single point		Yes	
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.4.0	<b>LIGHTING</b>			
a	For construction work (supply of all the necessary materials) 1. At office/storage area 2. At the preassembly area 3. At the construction site /area		Yes	
b	For construction work (execution of the lighting work/ arrangements) 1. At office/storage area 2. At the preassembly area 3 At the construction site /area		Yes	
c	Providing the necessary consumables like bulbs, switches, etc during the course of project work		Yes	

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

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

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – IV: T&Ps and MMEs to be deployed by Contractor**

---

**APPENDIX-I**

**4.1 LIST OF EQUIPMENTS TO BE MOBILISED TO SITE (MINIMUM)**

<b>Sl. No.</b>	<b>Description</b>	<b>Quantity</b>
1	Shell and auger boring set	1
2	Rotary core drilling unit(Hydraulic feed)	1
3	Static cone penetration test equipment - 20T capacity	1
4	Dynamic cone penetration test equipment	1
5	Plate load test set up	1
6	Field permeability test set up	1
7	Menard pressure meter or equivalent set up with limit pressure of 80kg/sq.cm.	1
8	Seismic refraction test set up	1
9	Electrical resistivity test set up	1

**Note:**

**Additional equipments shall be mobilized if required as per the directions of the engineer-in-charge to match the work schedule.**

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – IV: T&Ps and MMEs to be deployed by Contractor**

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**APPENDIX-II**

**4.2 MINIMUM STAFF TO BE DEPLOYED AT SITE**

<b>Sl. No.</b>	<b>Description</b>	<b>Quantity</b>
1	Geotechnical Engineer	1
2	Engineering Geologist	1
3	Supervisor	2
4	Qualified Surveyor	1
5	Rig Operators	2
6	Mechanic	2

**Note:**

**Indicate minimum manpower to be deployed at site.**

**4.3 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. Any consumables required for carrying out the work covered under this scope of work shall be arranged by contractor and to be procured and used for the work shall have prior approval of BHEL engineer in regard to brand and quality specification.

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

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

# 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 own site establishment and be ready to commence the work within **five days** from the date of fax Letter of Intent or as per directions of BHEL.

The contractor has to subsequently augment his resources in such a manner that the entire work is completed to achieve the following **tentative** schedule:

ACTIVITY	SCHEDULE OF COMPLETION
<b>PART-1: TOPOGRAPHICAL SURVEY</b> Topographical survey and item covered in Part-1. Please note that bidder has to strictly complete survey work and submit topographical report and required map to BHEL-PEM within 15 days from date of issue of LOI. Any delay in Part A will be subjected to LD as per tender clause.	<b>15 days</b> from the date of issue of LOI
<b>PART-2:-GEOTECHNICAL INVESTIGATION</b> Completion of bore holes, core drilling in rocks, pressure meter test in boreholes,dynamic cone Penetration Test, Plate load test, cyclic plate load test, cross hole shear wave test, seismic refraction test, field vane shear test, electrical resistivity test, pump in type field permeability test by constant head/falling head and double packer method, block vibration test ,pump out permeability test,chemical test and necessary laboratory tests such as determination of bulk density and moisture content, sieve analysis, hydrometer analysis, liquid limit and plastic limit, shrinkage limit, moisture content , slake durability index , specific gravity, swell pressure, free swell index, relative density, unconfined compressive strength (both at saturated and in – situ water content ),Point load strength, direct shear test, triaxial shear test (unconsolidated undrained test), one dimensional consolidation test, standard proctor compaction test, CBR test at soaked condition , chemical analysis and all test mentioned in BOQand submission of preliminary report covering the recommendation of type of foundations to be adopted. Preliminary report shall be submitted to <b>BHEL-PEM- Noida</b> with copy to BHEL- Nagpur and respective site.	<b>45 days</b> from the date of issue of LOI
Completion of balance field work and laboratory tests and draft report shall be submitted to <b>BHEL-PEM- Noida</b> with copy to BHEL- Nagpur and respective site.	<b>55 days</b> from the date of issue of LOI

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – VI: TIME SCHEDULE

Submission of Final Report	Within <b>5 days</b> from the date of receipt of comments of BHEL by the contractor.
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### 6.1.2

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 parallel works in all fronts as made available to contractor.

### 6.1.3

Contractor shall have to work round the clock on such critical activities as a part of catch up programme to meet the project requirement to the extent possible and shall also provide required resources as part of scope of work.

### 6.1.4 Start of Contract Period and Duration.

The total contract period for completion of entire work s as per tender specification shall be **60 (Sixty) Days** from the date of LOI.

## 6.2 Progress Monitoring and Contract Extension

### 6.2.1 Progress Monitoring

Progress will be reviewed periodically (daily / weekly / monthly) including month end review vis-à-vis the plans drawn as above. The contractor shall submit periodical progress reports, and other reports / information including manpower, consumables etc as desired by BHEL.

### 6.2.2 Contract Extension

The entire work shall be completed by the contractor within the time schedule or within such extended periods of time as may be allowed by BHEL under clause 2.11 of General Conditions of Contract.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – VII: TERMS OF PAYMENT

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### 7.0 TERMS OF PAYMENT

#### 7.1

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.

**NO PVC AND NO ORC IS APPLICABLE.**

#### 7.2

General conditions of contract shall be referred to as regards mode of payment, and measurement of the work completed.

**Rates are inclusive of all taxes except Service taxes.**

#### 7.3

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

#### 7.4

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 labour wages and other dues in the meanwhile.

#### 7.5

**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

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – VII: TERMS OF PAYMENT**

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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.

**7.6 Progressive Payment for Civil**

The percentage of payment for progressive completion of work in various categories of work shall be as under:

**7.7 Civil Work**

100% of Item Rate on Pro-Rata Basis against Monthly RA Bills.

The RA bill payment shall be made as made as per Cl no 10.0 of Chapter –X of SCC and as per CL NO: 2.6 of GCC

**7.8 Extra/Additional Items Of Work:-**

As per General Conditions of Contract.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter-VIII: Taxes and Other Duties

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### 8.0 TAXES, DUTIES, LEVIES (Consolidated Rev 03 dated 09/04/2013)

#### 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 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.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter-VIII: Taxes and Other Duties

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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 )~~

~~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

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 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

### APPENDIX – III

#### **FOLLOWING DRAWINGS ARE ENCLOSED WITH THE TENDER:-**

Following Drawings are enclosed with the tender

SN	Title	Document ref. no.
1	Bench Mark Pillar	<b>PE-DG-K13-601-C001</b>
2	Grid Pillar /Reference Pillar	<b>PE-DG-K13-601-C001</b>
3	Topographical Survey Layout	<b>PE-DG-K13-601-C001</b>
4	Geotechnical Investigation Layout	<b>PE-DG-K13-601-C001</b>

Note:

The above listed drawings are tentative and strictly for tender purpose only. Change in the drawing, if any, will be intimated during execution. These drawings are the property of BHEL and should not be made use of by the contractor except for the purpose of implementing this contract. All these drawings should be returned to BHEL on completion of the work. The interpretation of BHEL engineer regarding the details shown in the details shown in the drawing shall be final, conclusive and binding.

## APPENDIX-IV

### SUMMARY OF LABORATORY TEST RESULTS ON ROCK CORE SAMPLES

BORE HOLE NO.	
DEPTH	
CORE PIECE NO.	
MOISTURE CONTENT	
SPECIFIC GRAVITY	
HARDNESS	
POROSITY	
DRY DENSITY	
SLAKE DURABILITY	
POINT LOAD STRENGTH INDEX	
DEFORMABILITY (DRY /SATURATED)	
UNCONFINED COMPRESSIVE STRENGTH ( INSITU/SATURATED)	
CORE DESCRIPTION	
REMARKS	



UCC	Unconfined compression test	S.Pr	Swelling pressure (kN/Sq.m)
VST	Vane shear test	FSI	Free swell index (%)
Tuu	Unconsolidated undrained triaxial test	e <sub>o</sub>	Initial Void ratio
Tcu	Consolidated Undrained Triaxial test with pore pressure	Pc	Preconsolidation pressure (kN/Sq.m)
Tcd	Consolidated drained triaxial test ( Note: Replace T by D for Direct Shear test)	Cc	Compression index

**APPENDIX-VI**

**INDICATIVE LIST OF TEST TO BE CARRIED OUT**

**(PLEASE REFER SEPARATE SHEET)**

<b>S.N.</b>	<b>Test place</b>	<b>Subject</b>	<b>Test required to be done</b>	<b>Specification ref.</b>
<b>1</b>	<b>Field investigation</b>			
	1	Drilling boreholes through all kinds of soil including rock	1)SPT 2)Stand pipes and piezometers for GWT. 3)Sub soil water samples for Chemical analysis like pH, turbidity, sulphate, carbonate, nitrate, chloride contents, presence of organic content and Suspended Solid in laboratory 4)Permeability test: (a) By Constant head method or (b) Falling head method (c) Single and double packer method for rocks 5)Field vane shear test 6)Pressure meter test 7)Cross hole shear test 8)Lab tests	Cl. No.6 ,P/8 of 50
	2	Drilling boreholes through rock with NX size & TC bits.		Cl. No.6 ,P/8 of 50

3	Excavation of trial pits in all types of soil & weathered rock	1)Percolation test for permeability 2)SPT 3)Undisturbed samples are used to estimate physical,strength and settlement properties of soil for which static cone penetration test can be done which is useful to estimate various physical and engineering properties of soil in a strata.	Cl. No.6.6 ,P/20 of 50
4	Plate load test (PLT)		Cl. No.6.10 ,P/24 of 50
5	Static Plate load test (SPLT)	As per IS code (if required)	
6	Cyclic Plate load test (CPLT)		Cl. No.6.11 ,P/25 of 50
7	Standard Penetration Test (SPT)		
8	Dynamic cone penetration test(DCPT)		Cl. No.6.9 ,P/23 of 50
9	Static cone penetration test(SCPT)		Cl. No.6.8 ,P/23 of 50
10	Electrical resistivity test. (ERT)		Cl. No.6.13 ,P/26 of 50
11	Pressure Meter test (PMT)		Cl. No.6.16 ,P/28 of 50
12	Seismic refraction test (SRT)		Cl. No.6.14 ,P/26 of 50
13	Cross hole Shear wave test (CHSWT)		Cl. No.6.15 ,P/27 of 50
14	Field vane shear test (FVST)		Cl. No.6.7 ,P/22 of 50
15	Pump-in type Field permeability test (FPT) by -		

		(a) Falling head method ( in bore hole)		Cl. No.6.5.2 (b),P/19 of 50
		(b) Constant head method ( in bore hole)		Cl. No.6.5.2 (a),P/19 of 50
		(c) Percolation Test (in trial pit)		Cl.No.6.5.2 (c) ,P/19 of 50
	16	Field permeability test (FPT) by -		
		(a) Single Packer method		Cl.No.7.6(a) ,P/34 of 50
		(b) Double Packer method		Cl.No.7.6(b) ,P/34 of 50
	17	Wave propagation test	As per IS code (if required)	
	19)	Field CBR test		Cl.No.6.12 ,P/26 of 50
	20)	Pressure meter test		Cl.No.6.16,P/28 of 50
<b>2</b>	<b>Laboratory Test on Soil Samples</b>			
	1	Bulk density and moisture content	Undisturbed soil samples	Cl. No. 8.2, P/36 of 50
	2	Sieve analysis		Cl. No. 8.2(a), P/36 of 50
	3	Hydrometer analysis		Cl. No. 8.2(a), P/36 of 50
	4	Liquid limit and plastic limit		Cl. No. 8.2(a), P/36 of 50
	5	Shrinkage limit		Cl. No. 8.2(a), P/36 of 50
	6	Specific gravity	Disturbed sample	Cl. No. 8.2(a), P/36 of 50
	7	Swell pressure		Cl. No. 8.2(a), P/36 of 50
	8	Free swell index		Cl. No. 8.2(a), P/36 of 50
	9	Relative density(for sand)	Undisturbed soil samples	Cl. No. 8.2, P/36 of 50
	10	Unconfined compressive strength	Undisturbed soil samples	Cl. No. 8.2, P/36 of 50

	11	Box shear test	Undisturbed soil samples	Cl. No. 8.2, P/36 of 50
	12	Direct shear test		
	13	Triaxial shear test	Undisturbed/disturbed soil samples depending on type of soil and field conditions	Cl. No. 8.2, P/36 of 50
		(a) unconsolidated undrained		
		(b) Consolidated undrained test with the measurement of pore water pressure		
		(c) Consolidated drained		
		One dimensional consolidation test		
	15	Standard Proctor compaction test		NA
	16	CBR test	Undisturbed/disturbed soil samples	Cl. No. 8.3(h), P/36 of 50
		(a) soaked conditions		
		(b) un-soaked conditions		
	17	Chemical analysis		
	Chemical analysis of sub soil water	Determination of pH,carbonate,sulphate,chloride and nitrate contents,organic matter,salinity and any other chemicals harmful to foundation material		Cl.No.8.3(f) ,P/38 of 50
	Chemical analysis of sub soil water sample	Colour,odour,turbidity,pH and chemical contents such as carbonate,sulphate,chloride,nitrate,organic matter and any other chemicals harmful to foundation material		Cl.No. 8.3(g) ,P/38 of 50
	18	Consolidation test		
	19	Bearing capacity		
3	<b>Laboratory Test on Rock Samples</b>			
	1	Moisture content, porosity & density		Cl. No. 8.2( C), P/37 of 50

	2	Specific gravity		Cl. No. 8.2( C), P/37 of 50
	3	Hardness		Cl. No. 8.2( C), P/37 of 50
	4	Slake durability index		Cl. No. 8.2( C), P/37 of 50
	5	Unconfined compressive strength		Cl. No. 8.2( C), P/37 of 50
		(a) saturated		
		(b) In-situ water content		
	6	Point load strength		Cl. No. 8.2( C), P/37 of 50
	7	Deformability test (Saturated & Dry sample)		Cl. No. 8.2( C), P/37 of 50
	Disturbed samples	lab tests such as sieve analysis,index properties,specific gravity,chemical analysis.which was available from SPT		
	Undisturbed samples	to estimate physical,strength and settlement properties of soil		
	<b>Note</b>	<b>Drilling boreholes through all kinds of soil including rock</b>	<b>All Bore-Log should have the following information aprt from the other test report</b>	
			I: No. of boreholes,	
			II: depth of boreholes,	
			III: Co-ordinates (m)	
			IV: Ground Elevation(R.L.) m	

BHEL-PSWR

Tender Specification No: : BHE/PW/PUR/KHARGONE-GEO/1324  
Technical Conditions of Contract –Volume I A (Part I: Contract Specific Details)

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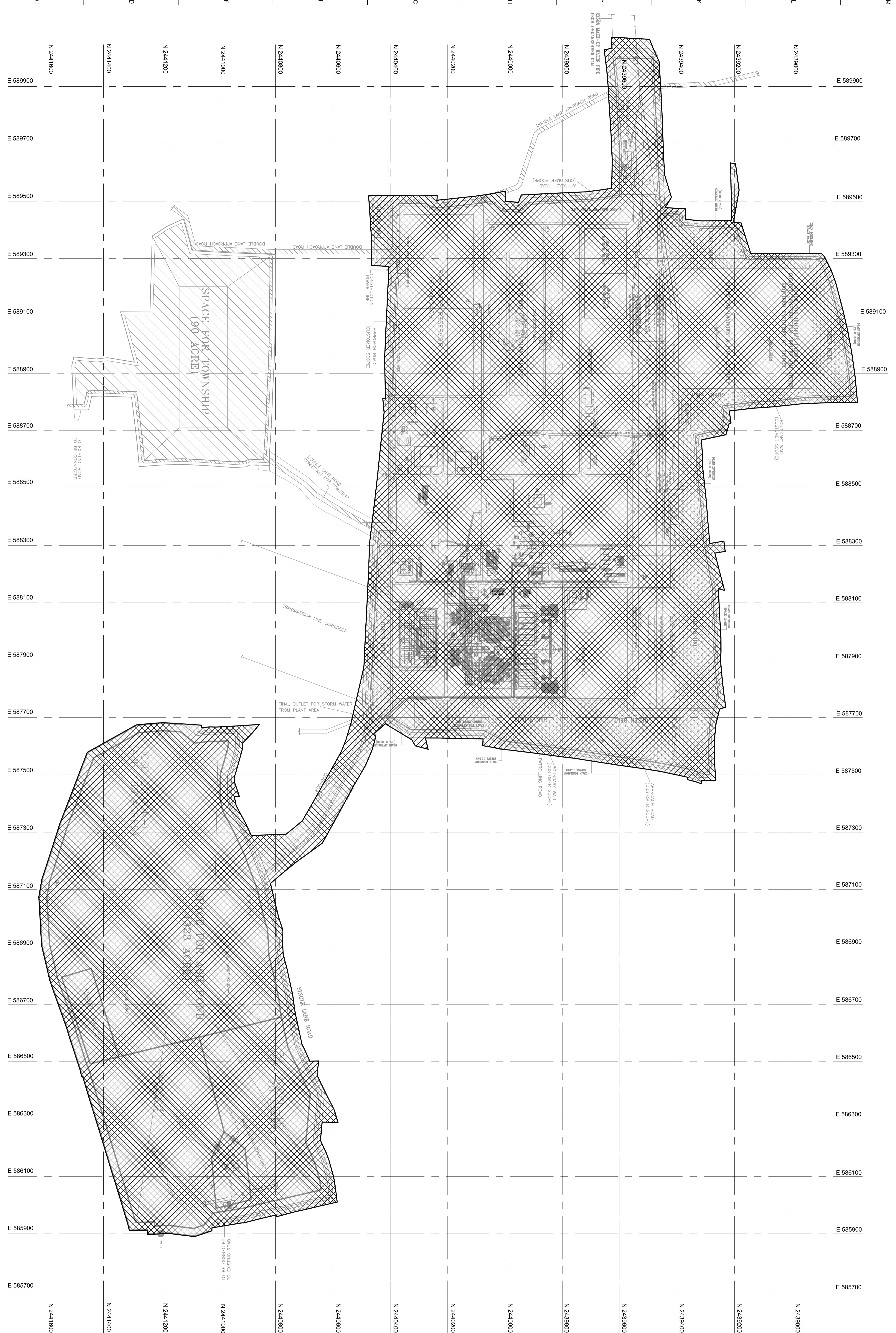
			V: Ground Water Table (GWT) m	
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# SPECIAL CONDITIONS OF CONTRACT (SCC)

## CHAPTER IX –DRAWINGS

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Refer VOL-I-E-STANDARD SPECIFICATIONM FOR GEOTECHNICAL INVESTIGATION,



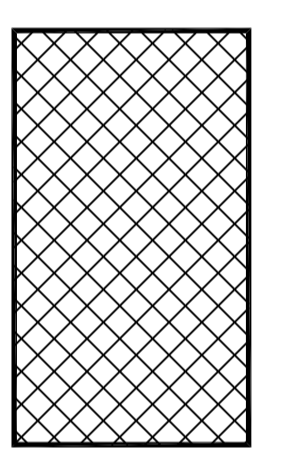
**NOTES:-**

1. AREA MARKED FOR TOPOGRAPHICAL SURVEY AND GEOTECHNICAL INVESTIGATION IS INDICATIVE ONLY. THE EXACT LOCATION FOR TOPOGRAPHICAL SURVEY AND GEOTECHNICAL INVESTIGATION SHALL BE FURNISHED DURING EXECUTION.
2. TOPOGRAPHICAL SURVEY SHALL BE CARRIED OUT AS PER SPECIFICATION NO. PE-DC-K13-601-C001.
3. GEOTECHNICAL INVESTIGATION SHALL BE CARRIED OUT AS PER SPECIFICATION NO. PE-TS-999-603-002 AND PE-DC-K13-602-C002.

**REFERENCE DRAWING:-**

DRAWING NO. PE-DG-K13-100-M001 TITLED "PLOT PLAN", REV.-00.

**LEGEND:-**



AREA FOR TOPOGRAPHICAL SURVEY & GEOTECHNICAL INVESTIGATION

TENDER PURPOSE ONLY

<b>CUSTOMER</b> NATIONAL THERMAL POWER CORPORATION LTD. KHARGONE SUPPR THERMAL POWER PROJECT (2X660 MW)		<b>STATUS</b> PROPOSAL	
<b>JOB NO.</b> K13	<b>REQ. DATE</b> 14/07/2024	<b>APPD. DATE</b> 14/07/2024	<b>REV. 1</b> 14/07/2024
<b>TO</b> BHARAT HEAVY ELECTRICALS LTD PROJECT MGMT. NEW DELHI	<b>BY</b> [Signature]	<b>CHKD.</b> [Signature]	<b>APPD.</b> [Signature]
<b>TITLE</b> TOPOGRAPHICAL SURVEY & GEOTECHNICAL INVESTIGATION LAYOUT	<b>DRAWING NO.</b> PE-DG-K13-601-C001	<b>SCALE</b> 1:1	<b>DATE</b> 14/07/2024