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## TENDER SPECIFICATION

**TENDER NO. BHEL/NR/SCT/ GVK/CHEM CLEAN/842**

**FOR**

**“PRE-BOILER FLUSHING & CHEMICAL CLEANING OF BOILERS AT 2X270 MW GVK, GOINDWAL TPS, DISTT. TARAN TARAN, PUNJAB.”**

### **PART I – TECHNICAL BID**



**Bharat Heavy Electricals Limited**  
(A Govt. Of India Undertaking)  
**Power Sector – Northern Region,**  
**Plot No. 25 , Sector - 16A ,**  
**Distt. Gautam Budh Nagar, NOIDA – 201 301(INDIA)**



ISO 9001, ISO 14001 and  
OHSAS 18001 certified company  
SubContract and Purchase  
Deptt.

**Bharat Heavy Electricals Limited**  
(A Govt. Of India Undertaking)  
**Power Sector – Northern Region,**  
**Plot No. 25 , Sector - 16A ,**  
**Distt. Gautam Budh Nagar, NOIDA – 201 301(INDIA)**  
**Phone: 0091-0120-2515476 / 2416273 / 2416279**  
**Fax 091-0120-2416528 / 2515467**  
**Email:samriddhi@bhel.com/swapan@bhel.com**

**TENDER NO. BHEL/NR/SCT/ GVK/CHEM CLEAN/842**

**IMPORTANT NOTE**

PURCHASER OF THIS TENDER DOCUMENT IS ADVISED TO CHECK AND ENSURE COMPLETION OF ALL PAGES OF TENDER DOCUMENT AND REPORT ANY DISCREPANCY TIMELY FOR CORRECTIVE ACTION, IF ANY, TO THE ISSUING AUTHORITY BEFORE THE BIDS ARE SUBMITTED. ORIGINAL COPY OF TENDER DOCUMENT COMPLETE IN ALL RESPECTS MUST BE SUBMITTED BACK AS PART OF THE BID WITHOUT WHICH THE SAME IS LIABLE TO BE REJECTED BY BHEL.

THIS TENDER SPECIFICATION ISSUED TO:

M/S-----  
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Rev 00  
6<sup>th</sup> July  
2010

# NOTICE INVITING TENDER

(Document No PS: MSX: NIT)

Bharat Heavy Electricals Limited



**NOTICE INVITING TENDER (NIT)**  
**NOTE: BIDDER MAY DOWNLOAD FROM WEB SITES**  
**OR**  
**PURCHASE TENDERS FROM THIS OFFICE ALSO**

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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	<b>BHEL/NR/SCT/ GVK/CHEM CLEAN/842</b>	
ii	Broad Scope of job	Pre-boiler flushing & Chemical cleaning of Boilers at 2X270 MW GVK, GOINDWAL TPS, DISTT. TARAN TARAN, PUNJAB	
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>	Applicable
b	Volume-IB	<i>Special Conditions of Contract (SCC)</i>	Applicable
c	Volume-IC	<i>General Conditions of Contract (GCC)</i>	Applicable
d	Volume-ID	<i>Forms and Procedures</i>	
e	Volume-II	<i>Price Schedule (Absolute value).</i>	Applicable
iv	Issue of Tender Documents	<ol style="list-style-type: none"> <li><b><u>Sale from BHEL PS Regional office at :</u></b>  <b>Start : 29.11..2011 , Time :0900 to 1200 Hrs</b>  <b>Close: 19.12.2011 , Time : 1200 Hrs</b></li> <li>From BHEL website (<a href="http://www.bhel.com">www.bhel.com</a>)  Tender documents can however be downloaded from website till due date of submission</li> </ol>	Applicable
v	DUE DATE & TIME OF OFFER SUBMISSION	<i>Date : 19.12.2011, Time : 1500Hrs</i> <i>Place :</i>	Applicable
vi	OPENING OF TENDER	<i>1/2 hour after the latest due date and time of Offer submission</i> <i>Notes:</i> <i>(1) In case the due date of opening of tender becomes a non-working day, tenders shall be opened on next working day at the same time.</i> <i>(2) Bidder may depute representative to witness the opening of tender</i>	Applicable
vii	EMD AMOUNT	<i>₹ 1,50,000/-</i>	Applicable
viii	COST OF TENDER	<i>₹ 2000/-.</i>	Applicable/Not Applicable
ix	LAST DATE FOR SEEKING CLARIFICATION	<i>Date: 17.12..2011</i> <i>Along with soft version also, addressing to undersigned &amp; to others as per contact address given below</i>	Applicable

x	SCHEDULE OF Pre Bid Discussion (PBD)	Date : __/__/____, Time : Place :	Applicable/ Not applicable.
xi	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)		Applicable/Not Applicable
xii	Latest updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage ( <a href="http://www.bhel.com">www.bhel.com</a> -->Tender Notifications →View 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 Noida 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 Noida, 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 Noida. 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)
- 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>	
	ENVELOPE – I superscribed as : <u>PART-I (TECHNO COMMERCIAL BID)</u> <u>TENDER NO :</u> <u>NAME OF WORK :</u> <u>PROJECT:</u> <u>DUE DATE OF SUBMISSION:</u> <u>CONTAINING THE FOLLOWING:-</u>	
i.	Covering letter/Offer forwarding letter of Tenderer.	
ii.	Duly filled-in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above.  <b>Note:</b>	

	<p>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.</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 reserves the right to reject the tender</p>	
iii.	<p>Supporting documents/ annexure/ schedules/ drawing etc as required in line with Pre-Qualification criteria.</p> <p>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.</p>	
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>	
	<p><u>ENVELOPE – II superscribed as:</u>  PART-I (EMD/COST of TENDER)  TENDER NO :  NAME OF WORK :  PROJECT:  DUE DATE OF SUBMISSION:</p> <p><b>CONTAINING THE FOLLOWING:-</b></p>	
i.	<p>1. Earnest Money Deposit (EMD) in the form as indicated in this Tender</p> <p style="text-align: center;"><b>OR</b></p> <p>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>		
	PRICE BID 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 (MAIN ENVELOPE / OUTER ENVELOPE)</b> 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>o Envelopes I</li> <li>o Envelopes II</li> <li>o 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 No Deviation with respect to tender clauses and no additional clauses/ suggestions/ in Techno-commercial bid/ Price bid shall normally 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: Shall be applicable for this tender**

**Bidders capacity for executing the job under tender shall be assessed as per the following:**

I. **Assigning Weightages (A) for Similar Jobs Under-Execution:** Weightages shall be worked out and assigned based on the average number of Similar Works under execution including works yet to be commenced by the agency, in the following manner:

i). **Number of Similar Jobs**

- a) No. of jobs in BHEL, PSER : Say 'J'
- b) No. of jobs in BHEL, PSSR : Say 'K'
- c) No. of jobs in BHEL, PSWR : Say 'L'
- d) No. of jobs in BHEL, PSNR : Say 'M'
- e) No. of jobs with other customers\* : Say 'N' (\*: Other than BHEL PSER, PSSR, PSWR & PSNR)
- f) Average No. of Jobs is 'P' = (J+K+L+M+N) divided by 5

ii) **Weightage "A" assigned to bidders based on Average Number of jobs "P":**

- a) If 'P' = 0-1, "A" will be equal to '3'
- b) If 'P' = 2-3, "A" will be equal to '2'
- c) If 'P' = 4-5, "A" will be equal to '1'
- d) If 'P' is Above 5, "A" will be equal to '0'

II. Weightage "B" for Quarterly Performance Reports of Vendors: This shall be based on the averages of the net weighted score obtained by the bidder for the jobs under execution (excluding works not commenced) for the quarter previous to the last quarter reckoned from the date of latest due date of submission, in all four Regions i.e BHEL PSER, PSSR, PSWR & PSNR, in the following manner.

i). Ratings by Power Sector Region:

- a) PS ER's Rating 'Rer' =  $(X_1 + X_2 + \dots + X_n)$  divided by n
- b) PS WR's Rating 'Rwr' =  $(X_1 + X_2 + \dots + X_n)$  divided by n
- c) PS SR's Rating 'Rsr' =  $(X_1 + X_2 + \dots + X_n)$  divided by n
- d) PS NR's Rating 'Rnr' =  $(X_1 + X_2 + \dots + X_n)$  divided by n
- e) Over all Power Sector Region Rating ' $R_{BHEL}$ ' = (Rer+ Rwr+ Rsr+ Rnr) divided by 4

(where " $X_1, X_2, X_3, \dots, X_n$ " is the net weighted score obtained by the bidder as per the "Evaluation of Contractor Performance (Quarterly)" against the various contracts 'n' under execution in the respective Region).

ii) Weightage "B" assigned to bidders based on Overall Power Sector Rating ( $R_{BHEL}$ ):

- a) If  $R_{BHEL}$  is 80% and above, "B" will be equal to '6'
- b) If  $R_{BHEL}$  is  $> 70\% < 80\%$ , "B" will be equal to '5'
- c) If  $R_{BHEL}$  is  $> 60\% < 70\%$ , "B" will be equal to '4'
- d) If  $R_{BHEL}$  is  $= < 60\%$ , "B" will be equal to '0'

III. Evaluation of Bidders capacity to execute the job under tender: shall be based on the sum of scores obtained in 'A' and 'B', as below:

- a) 6 or above : Considered 'Qualified' for the job under tender
- b) Less than 6: Considered 'NOT Qualified' for the job under tender

IV. Explanatory note:

- a) Similar work means Boiler or Turbine or Civil or Electrical or CI, etc irrespective of rating of Plant
- b) Quarter shall be as per the quarter defined in the "Evaluation of Contractor performance (Quarterly)".  
For contracts where annexed Quarterly Evaluation performance was not part of the contract, 'Quarterly Performance Reports' previous to the last quarter reckoned from the date of latest due date of submission, given by the respective project site against the contract will be the basis for evaluation.
- c) Vendors who are not executing any jobs presently in the Region and first timers to the Region, may be considered subject to satisfying all other tender conditions
- d) 'Under execution' shall mean works in progress upto Boiler Steam Blowing (for Boiler and Auxilliaries) or Synchronisation (for all other jobs including Civil) shall be considered.

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 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. No additional claim shall be entertained by BHEL in future, on account of non-acquaintance of above.

- 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 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 (xi) of 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 pre-qualification evaluation/ techno-commercial bids, approval/ acceptance of customer (as applicable), etc. and date of opening of price bids shall be intimated to only such bidders.
- 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) or specified otherwise in SCC of tender.
- 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 In case Consortium Bidding is allowed as per Pre Qualifying Requirement, then Prime Bidder and Consortium Partner shall enter into Consortium Agreement. Validity period of Consortium Agreement shall be 6 months after which the same can be re validated.

'Stand alone' bidder cannot become a 'prime bidder' or a 'consortium bidder' in a consortium 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. .

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

For BHARAT HEAVY ELECTRICALS LTD

(SCT)

Enclosure

01. Annexure-1: Pre Qualifying criteria.
02. Annexure-2: Check List.
- 03 Other Tender documents as per this NIT.

**ANNEXURE - 1****PRE QUALIFYING CRITERIA**

**JOB: Pre-boiler flushing & Chemical cleaning of Boilers at 2X270 MW GVK, Goindwal TPS, Distt. Taran Taran, Punjab.**

**TENDER NO.: BHEL/NR/SCT/ GVK/CHEM CLEAN/842**

SL NO	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria
		Name and Description of qualifying criteria
A	<b>Submission of Integrity Pact duly signed.</b>	<b>Not Applicable</b>
B	<b>Assessment of Capacity of Bidder to execute the work as per sl no. 9 of NIT (if applicable)</b>	<b>Applicable</b>
C	<p><b>Technical</b></p> <p>Bidder who wish to participate should have executed during the last seven years, as on date of opening of Technical Bids, works of similar nature covered in this tender in power plant/ industrial unit value of which shall be either of following:</p> <p>(Relevant document in support of above shall be submitted.)</p>	
C1	<b>One work of similar nature of value not less than ₹ 52 Lacs.</b>	
C2	<b>Two works of similar nature each of value not less than ₹ 33 Lacs.</b>	
C3	<b>Three works of similar nature each of value not less than ₹ 26 Lacs</b>	
D	<p><b><u>Financial TURNOVER</u></b></p> <p>Tenderers should have an average annual turnover of minimum of ₹ 20 Lacs (Rupees Twenty Lacs only) based on the audited accounts of last three financial years (2007-08, 2008-09 &amp; 2009-10) or (2008-09, 2009-10 &amp; 2010-11). Bidder shall submit audited annual accounts (balance sheets and profit &amp; loss account) in support of this.</p>	
E	<p><b>Approval of Customer (if applicable)</b></p> <p><b>Note: Names of bidders who stand qualified after compliance of criteria A to D shall be forwarded to customer for their approval. Price bid of only those bidders shall be opened who are approved by customer.</b></p>	<b>Not Applicable</b>

<b>F</b>	<b>Consortium criteria (if applicable)</b>	<b>Not Applicable</b>
<b>NOTES:</b>  <ol style="list-style-type: none"><li>1. If the Qualifying Work is completed in the seven (7) year period as specified above, even if it has been started earlier, the same will also be considered meeting the qualifying requirements.</li><li>2. The word ‘work of similar nature’ means Pre- Boiler Flushing &amp; Chemical Cleaning of Boilers.</li></ol>		

**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	Details of Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Fax No:	
4	EMD DETAILS	DD No:                      Date : Bank :                      Amount: Please tick ( <input type="checkbox"/> ) whichever applicable:- ONE TIME EMD / ONLY FOR THIS TENDER	
5	Validity of Offer	TO BE VALID FOR SIX MONTHS FROM DUE DATE	
		APPLICABILITY	BIDDER REPLY
6	Whether the format for compliance with PRE QUALIFICATION CRITERIA (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format	Applicable	YES / NO
7	Audited profit and Loss Account for the last three years	Applicable/Not Applicable	YES/NO
8	Copy of 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 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
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	Applicable/Not Applicable	YES/NO
20	Analysis of Unit rates	Applicable/Not Applicable	YES/NO

NOTE : STRIKE OFF 'YES' OR 'NO', AS APPLICABLE

DATE :

AUTHORISED SIGNATORY  
(With Name, Designation and Company seal)



ISO 9001, ISO 14001, OHSAS  
18001 and SA-8000 certified  
company  
SubContract and Purchase  
Deptt.

**Bharat Heavy Electricals Limited**  
(A Govt. Of India Undertaking)  
**Power Sector – Northren Region,**  
Plot No. 25 , Sector - 16A ,  
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Phone: 0091-0120-2416273 / 2416274  
Fax 091-0120-2416528  
**Email:swapan@bhelsnr.co.in/samriddhi@bhelsnr.co.in**

## NOTICE INVITING TENDER

LAST DATE OF SALE: 19.12.2011 (12.00 hrs)

LAST DATE OF SUBMISSION:19.12.2011(15.00 Hrs)

NIT NO. / DESCRIPTION OF WORK
<p><b>TENDER NO. BHEL/NR/SCT/ GVK/CHEM CLEAN/842</b></p> <p><b>Sealed tenders are invited from the contractors fulfilling qualifying requirements as given in tender document for the work of “Pre-boiler flushing &amp; Chemical cleaning of Boilers at 2X270 MW GVK, Goindwal TPS, Distt. Taran Taran, Punjab.”</b></p>

### NOTES:-

1. The complete tender documents can be downloaded from BHEL Web Site, [www.bhel.com](http://www.bhel.com)
2. All corrigenda, addenda, amendments and clarifications to this Tender will be hosted in this web page and not in the newspaper

**SDGM / SCT**

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TENDER NO. BHEL/NR/SCT/ GVK/CHEM CLEAN/842	
TECHINICAL CONDITIONS OF CONTRACT (TCC)	PAGE 1 OF 29

**FOR OFFICIAL USE ONLY  
NOT FOR PUBLICATION**

**TENDERER'S COPY  
ORIGINAL COPY**

## **TECHINICAL CONDITIONS OF CONTRACT (TCC)**

**TENDER NO. BHEL/NR/SCT/ GVK/CHEM CLEAN/842**

**FOR**

**PRE-BOILER FLUSHING & CHEMICAL CLEANING OF BOILERS AT  
2X270 MW GVK, GOINDWAL TPS, DISTT. TARAN TARAN, PUNJAB.**



**Bharat Heavy Electricals Limited  
(A Govt. Of India Undertaking)  
Power Sector – Northern Region,  
Plot No. 25 , Sector - 16A ,  
Distt. Gautam Budh Nagar, NOIDA – 201 301.INDIA**

S.No.	DESCRIPTION	Chapter No.	PAGE NO.
1.	Project Information	Chapter-I	
2.	Scope of Works	Chapter-II	
3.	Facilities in the scope of Contractor/BHEL (Scope Matrix)	Chapter-III	
4.	T&Ps and MMEs to be deployed by Contractor	Chapter-IV	
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## Chapter - 1: Project Information

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### 1. PROJECT INFORMATION

Name of the Owner		<b>GVK POWER (GOINDWAL SAHIB) Pvt. LIMITED</b>
Address	:	GVK Goindwal Sahib TPS, District Taran Taran, Punjab
Location	:	Taran Taran- Kapurthala road about 3 Kms from Goindwal Sahib
Capacity	:	2X270 MW
Route	:	By Road from Jalandhar via Kapurthala By Road from Amritsar via Taran Taran
Nearest City	:	Taran Taran - 24 KM Kapurthala- 25 KM Jalandhar -40 KM Amritsar -45 KM
Maximum Temperature	:	47.7 Deg C
Minimum Temperature	:	(-) 3.3 Deg C
Relative Humidity	:	25%-75%

## Chapter - 2: SCOPE OF WORKS

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### 2.0 SCOPE OF WORK

2.1 BHEL has been awarded the work of Design, Manufacture, supply, installation, erection, commissioning, trial operation & handing over of BTG package of **2x270 MW units at GVK, Goindwal TPS, Distt. Tarn taran, Punjab.** The equipment consists of boiler, Electro-static precipitator, Fans, milling systems, steam turbines, generators, boilers feed pumps, condensate extraction pumps and piping along with the associated auxiliary supports and controls.

**The scope of work under this tender broadly consists of :**

1. Pre-boiler flushing consists of detergent flushing of feed lines, condensate lines, drip lines, deaerator and heaters etc.
2. Chemical cleaning(EDTA) of Boilers.
3. The **Bill of Temporary Material** indicated in **Annexure II** for carrying out chemical cleaning and pre boiler flushing. The actual scheme of pipelines for the chemical cleaning and flushing process will be provided by BHEL at site. **All required materials listed in the specifications or even any additional requirement to perform and complete the process shall be provided by the contractor within the awarded price.** The bidder must take care of such variations in their offer.
4. Above cleaning process for subsequent units existing at one individual project, generally be done separately and hence the same set of materials and facilities shall be utilized for individual units.
5. The process has to be done as per the process scheduled for individual projects as listed in the schedule of activities. The contractor has to mobilize his set of resources from one place to other project sites for their optimum use. In case additional set of materials is required to meet the commissioning schedule of individual project, the same are to be arranged by the contractor within the awarded price.
6. All the consumables (including but not limited to gaskets, lub oil etc.) are to be supplied by contractor.
7. Thermocouples to be used should be accurate in the range of 0-200°C. All the instruments pressure & temp. Gauges should be calibrated with valid calibration certificates.
8. Instrument cables for measurement of temperature should be temperature compensated. They are to be laid from the measuring instrument to the control room. 02 numbers of thermocouples, 1500 mm long, are to be fixed inside the drum. 08 numbers of thermocouples, MTM peening type and K-type, along with pads are to be fixed on water wall and economiser tubes.

9. Only the source of power will be provided by the owner at one point at project site. Cables from the source of power to power distribution boards, Motor control centers and to individual equipments are to be provided and laid by the contractor. Earthing of individual motors is to be provided by contractor.
10. **Chemicals required for pre-boiler flushing and chemical cleaning of boiler will be supplied by BHEL/ owner. They are to be received, transported, used and handled by the contractor.**
11. Temporary drum level indications – 02 in numbers, one at the control room and the other near circulating pumps – along with electric bulbs, switches and cables are to be provided.
12. 04 Nos. temporary sample coolers along with connecting lines for samples and cooling water are to be erected by contractor. 02 Nos. coolers will be used for samples from bottom ring header. These coolers will be located at ground floor.  
02 Nos. coolers will used for samples for drum water. Existing drum sampling lines may be used with some modifications. These coolers will be located at operating floor.
13. All temporary connections to the existing systems, all modifications in existing pipelines, valves and in civil works are to be normalized by the contractor after pre-boiler flushing and chemical cleaning of boiler. All temporary supports erected for these operations are to be removed by the contractor after completion of the operations.
14. Two nos. temporary gauge glasses are to be erected by the contractor for local drum level indication. Temporary gauge glasses (range 900mm) will be supplied by the contractor.
15. Adequate number of safety equipments like goggles, masks, aprons, gloves, gum boots etc. are to be arranged by the contractor.

Minimum requirements for each boiler shall be as under

- |                                     |         |
|-------------------------------------|---------|
| • Gum boots ( various sizes )       | 6 Pairs |
| • Rubber gloves                     | 6 Pairs |
| • Rubber or Polythene aprons        | 6 Nos   |
| • Helmets                           | 12 Nos  |
| • Safety goggles plain glass        | 6 Nos   |
| • Face mask ( transparent, plastic) | 4 Nos   |

First aid box Containing dilute ammonium hydroxide, 50% sodium bicarbonate solution, eye lotion, bandages, tincture of iodine, cotton, burnol etc.

16. Laboratory equipments for testing of chemicals along with chemical reagents for testing are to be arranged by contractor. Testing personnel (chemists) are to be arranged by the contractor.

17. **The quantity mentioned in some of the above points is considered for one unit only.**
18. Electrical testing equipments like tong-tester, multimeter, megger etc. are to be arranged by the contractor. Ammeter for each motor is to be provided in its MCC.
19. Civil works related to pumping units, supports etc are to be carried out by the contractor.
20. All temporary lines are to be hydraulically tested as required.
21. The contractor has to make arrangement for pumping out the spent/neutralized EDTA after 15 days of aeration from neutralizing pit to a suitable location.
22. The contractor shall fabricate pipes, special bends, etc. threading and welding as required.
23. The contractor shall completely erect & test all the piping systems, covered in the specification including sampling lines, hangers & supports, valves & accessories in accordance with the drawings furnished. This includes all necessary bolting, welding, pre-heating, stress relieving, testing, cleaning. System shall be demonstrated in condition to operate continuously in a manner acceptable to the Engineer. Welding shall be used throughout for joining pipes except where flanged screwed or other type joints are specified or shown on the drawings. All piping shall be erected true to the lines & elevation as indicated in the drawings.
24. Pipes sent in standard length shall be cut to suit the site conditions and the layouts. Tubes or pipes wherever deemed to be convenient will be sent in running lengths with sufficient bends.
25. It is possible that a few flanges may not be matching. The contractor shall be required to cut and re-weld the same as and when required without any additional cost.
26. The contractor shall be responsible for any modifications of shop fabricated pipes prior to installation to accommodate minor site alteration in pipe routing at no extra cost.
27. All vents and drains for piping equipment covered in the scope whether shown in the drawings or not shall terminate in atmosphere and to pit as directed by BHEL.
28. Wherever piping erected by the contractor is connected to equipment/ piping erected by the other agencies the joint at the connecting point shall be the responsibility of the contractor of this specification.
29. Normally the valves will have prepared edges for welding. But, if it becomes necessary, the contractor will prepare new edges or recondition the edges by grinding or chamfering to match the corresponding tubes and pipes. All fittings like `T' pieces, weld neck flanges, reducers etc., shall be suitably matched with pipes for welding. The valves will have to be checked, cleaned

or overhauled in full or in part before erection after chemical cleaning and during commissioning.

30. The contractor shall be responsible for correct orientation of all valves so that seats, stems & hand wheels will be in desired location. It is the responsibility of the contractor to obtain the information regarding orientation of valves not fully located on drawings before the same are installed.
31. Suspension for piping, etc., will be supplied in running lengths, which shall be cut to suitable sizes and adjusted as required.
32. The adjustment of all supports erected for maintaining the proper slopes of piping wherever required is also included in the scope of the contractor.
33. No temporary supports should be welded on the piping. In case of absolute necessity prior approval should be taken from BHEL Engineer. In such cases heat treatment if required, shall be carried out by the contractor as part of subject work.
34. All supports and anchors shall be installed to obtain safe and reliable and complete pipe installation as per instructions of Engineer. Any additional support as called for by Engineer shall have to be fabricated and provided by the contractor. Contractor shall install piping in such a way that no excessive or destructive expansion forces exist under any condition. The contractor shall ensure that all supporting elements, anchors & restraint have been installed and adjusted in accordance with the drawings / sketches & other written instructions of the Engineer.
35. Layout of small bore piping as required shall be done as per site requirement. Necessary sketch for routing these lines should be got approved from BHEL by the contractor. There is a possibility of slight change in routing the above pipe lines even after completion of erection or from aesthetic point of view which should be carried out at no extra cost.
36. All the valves, including motorised valves, flap valves, etc. shall be serviced and lubricated to the satisfaction of Engineer before erecting the same and during pre-commissioning also. Welding or jointing of extension spindle for valves to suit the site conditions and operational facility shall be part of erection work within the quoted rates.
37. Additional platforms and ladders of permanent nature incidental to the job for approaching different equipment/ valves as per site requirement, which may not be indicated in drawings, shall be fabricated and installed by the contractor. The materials required will be supplied by BHEL free of cost.
38. Erection and welding of necessary instrumentation tapping points, valves to be provided on equipment, auxiliaries and pipe lines covered within the scope of this specification, will also be the responsibility of the contractor and will be done as per the instructions of BHEL Engineer at no extra cost.
39. BHEL shall have lien on all T&P's, IMTEs & other equipment of the Contractor brought to the Site. BHEL shall continue to hold the lien on all

such items throughout the period of Contract. No material brought to the Site shall be removed from the Site by the Contractor or his Sub-contractors without the prior written approval of the BHEL Engineer.

## **2.2 GENERAL**

2.2.1 This Tender specification covers the work of Pre-boiler flushing & chemical cleaning at 2x270 Mw GVK, Goindwal TPS,

2.2.2 The intent of this specification is to provide services according to most modern and proven techniques and codes. The omission of specific reference to any methods, equipment or material necessary for the proper and efficient services shall not relieve the contractor of the responsibility of providing such services/ facilities to complete the work or portion of work awarded to him. The quoted/ accepted rates/ **lumpsum price** shall deem to be inclusive of all such contingencies.

2.2.3 The contractor shall carry out the work in accordance with standard practices/ codes/ instructions/ drawings/ documents/ specification supplied by BHEL/ GVK from time to time.

2.2.4 The work shall conform to dimensions and tolerances given in various drawings and documents that will be provided during erection. If any portion of work is found to be defective in workmanship, not conforming to drawings or other stipulations, the contractor shall dismantle and redo the work duly replacing the defective materials at his cost failing which the job will be carried out by BHEL by engaging other agencies/ departmentally and recoveries will be effected from contractor's bills towards expenditure incurred including BHEL's usual overhead charges.

2.2.5 Following shall be the responsibility of contractor and have to be provided within finally accepted rates / prices:

- (a) Provision of all types of skilled labour, adequately qualified and experienced supervisors, engineers, watch and ward as required, Tools & plants, Calibrated inspection, measuring & test equipments as specified and otherwise required for the work and consumables for fabrication, erection, testing and material for handling for the entire scope under this contract.
- (b) Proper out-turn as per BHEL plan and commitment.
- (c) Completion of work as per Schedule given by BHEL.
- (d) Good quality and accurate workmanship for proper performances of equipment to the satisfaction of BHEL/ CUSTOMER.
- (e) Repair and rectification as per instruction of BHEL engineer.
- (f) Receipt, proper storage, preservation, Re-conservation of all chemicals.
- (g) Keeping all the erection area neat and clean.

**2.2.6 Contractor shall ensure following:**

- I. Contractor has to maintain contact with local hospital having ambulance facility, scanning & other ultra modern medical facilities required during emergency.
- II. Contractor has to ensure pre employment medical check for all staff & workers.
- III. Contractor has to ensure that adequate First Aid facilities with trained nurse are available at work site for emergency purpose. This emergency set-up should include, but not limited to, following

Male nurse (in shifts)  
 Oxygen set up  
 Breathing apparatus  
 Eye wash facility  
 Stretcher  
 Trauma blanket  
 Medicines

In addition to above, BHEL(through its another contractor) has arranged ambulance at work site for emergency purpose, which can be utilized by contractor in case of emergency. The charges for the same will be decided mutually at site. In case, under unavoidable circumstances, if the ambulance is not available/ being used elsewhere, the contractor will have to arrange for the same as under clause 2.2.6. (I).

**2.2.7 The contractor shall comply with following towards Social Accountability;**

- a) The contractor shall not employ any employee less than 15 years of age in pursuant to ILO convention. If any child labour were found to have been engaged, the Contractor shall be levied with expenses of bearing his education expenditure which will include stipend to substantiate appropriate education or employ any other member of family enabling to bear the child education expenditure.
- b) The contractor shall not engage Forced/ Bonded Labour and shall abide by abolition of Bonded Labour System (Abolition) Act, 1976.
- c) The contractor shall maintain Health & safety requirement as stipulated in the Contract and Contract Labour (Regulation & Abolition) Act, 1970.
- d) The Contractor shall abide by UN convention w.r.t. Human Rights and shall be liable for Discrimination/ Corporal punishment for failure in meeting with relevant requirements.
- e) The Contractor shall abide the requirement of Contract Labour (Regulation & Abolition) Act, 1970 for working hours.
- f) The Contractor shall abide by the Statutory requirement of Minimum Wages Act 1948, payment of Wages Act 1936.
- g) The Contractor shall arrange potable drinking water to its employees & workers.

## **2.3 PRELIMINARY and CIVIL WORKS**

- 2.3.1 Before starting erection job contractor shall ensure that area connected to his scope of work is sufficiently enclosed against ingress of dust and water and all debris have been cleared of from the floor to a designated area as per instruction of engineer. The contractor shall arrange to get the working area and surroundings cleared daily to ensure the dust free atmosphere and free from seepage water for working and shall maintain sufficient labour and general cleaning of work areas. Delay of work on this account will not be acceptable.
- 2.3.2 The contractor shall cover all opening on floor and put temporary hand railing on all sides of the floor to avoid any accident to the working personnel.
- 2.3.3 Any civil works required for safe and efficient operation of tools and tackles like grouting/ excavation/ casting of foundation/ anchor points for derricks, winches, guy ropes fastening scaffoldings etc. or any other temporary supports shall also be the contractor's responsibility. For these civil works all materials including cement/ steel and required facilities will have to be arranged by contractor at his own cost.**
- 2.3.4 The contractor shall provide his tool stores for special tools and instruments at a convenient place near to the place of working area.

## **2.4 Welding requirements.**

1. Contractor must ensure that the welders involved in the job are qualified as per BHEL/GVK procedures & statutory requirement (preferably IBR welder to be used)
2. Contractor to procure and use only BHEL/GVK approved welding electrodes.
3. Contractor to ensure storage, drying facilities of the welding electrodes as per BHEL norms.
4. Suitable edge preparation is required to make prior to carryout the welding.
5. Contractor to ensure proper cleaning of welds between the beads
6. No visible cracks, pinholes or incomplete fusion are allowed.
7. Under cuts should not exceed 1 mm.

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

### 3.0 FACILITIES IN THE SCOPE OF CONTRACTOR/BHEL

S.No.	Description	Scope /to be taken care by		Remarks
		BHEL	CONTRACTOR	
1.1.0	ESTABLISHMENT			
1.1.1	FOR CONSTRUCTION PURPOSE			
A.	Open space for office	YES		Limited space. (Free) As and where made available by M/s GVK
B.	Open space for storage	YES		Limited space.(Free) As and where made available by M/s GVK
1.1.2	FOR LABOUR COLONY			
A	Open space	YES		Limited space.(Free) As and where made available by M/s GVK
1.2.0	ELECTRICITY			
1.2.1.	Electricity for construction purposes (chargeable/free)			Chargeable PSEB tariff rates prevailing on the date of the award will be applicable. The applicable rates for Bulk Supply for HT

				consumers i.e.409 paise/kWh of Energy Rate and Rs.192/kVA MMC charges will be applicable
1.2.1.1	Single point source	YES		
1.2.1.2	Further distribution for the work to be done which include supply of materials & execution		YES	
1.2.2	Electricity for the office, stores, canteen etc of the bidder which include:			
1.2.2.1	Distribution from single point including supply of materials & service		YES	
1.2.2.2	Supply, Installation & connection of material of energy meter including operation & maintenance		YES	
1.2.2.3	Duties & deposits including statutory clearances for above		YES	
1.2.2.4	Demobilization of the facilities after completion of works		YES	
1.2.2.5	Electricity for living accommodation of the bidder's Staff, engineers, supervisors etc. on the above lines		YES	
1.3.0	WATER SUPPLY			
1.3.1	FOR CONSTRUCTION & LABOUR COLONY:			
1.3.1.1	Making the water available at single point		YES	Contractor to make Borewell himelf
1.3.1.2	Further distribution as per the requirement of work including supply of materials &		YES	

	execution			
1.4.0	LIGHTING			
1.4.1	For construction work (supply of all materials) 1. At office storage area 2. At preassembly area 3. At construction site/area		YES	
1.4.2	For construction work (execution of lighting work/arrangements) 1. At office storage area 2. At preassembly area 3. At construction site/area		YES	
	Providing the necessary consumables like bulbs, Switches, etc during the course of construction		YES	
1.5.0	Communications facilities for site operations of the bidder			
	Telephone, fax , internet ,intranet, email etc.		YES	
1.6.0	COMPRESSED AIR SUPPLY			
1.6.1	Supply of compressor and all other equipments required for compressor & compressed air system including pipes, valves, storage system etc.		YES	
1.6.2	Installation of the above system and operation & maintenance of the same		YES	
1.6.3	Supply of all the consumables for the above system during the contract period.		YES	
	ERECTION FACILITIES			
2.1.1	Providing erection drawings for all the Equipments covered under this scope	YES		
2.1.2	Drawings for construction method	YES	YES	In consultation with

				BHEL
2.1.3	As-built-drawings-where ever deviations Observed & executed and also based on Decisions taken at site		<b>YES</b>	do
2.1.4	Shipping lists etc for reference & planning the activities	YES	<b>YES</b>	<b>do</b>
2.1.5	Preparation of site erection schedules and other input requirements		<b>YES</b>	<b>do</b>
2.1.6	Review of performance & revision of site erection schedules in order to achieve the end dates & commitments	YES	<b>YES</b>	<b>do</b>
2.1.7	Weekly erection schedule based on Sl. No.2.1.5		<b>YES</b>	<b>do</b>
2.1.8	Daily erection/work plan based on Sl. No.2.1.7		<b>YES</b>	<b>do</b>
2.1.9	Periodic visit of senior official of 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 month		<b>YES</b>	
2.1.10	Preparation of preassembly bay		<b>YES</b>	

- 3.1** BHEL will not be responsible for any loss or damage to the contractor's equipment as a result of variation in voltage or frequency or interruptions in power supply.
- 3.2** The Contractor shall be responsible for providing all necessary facilities like residential accommodation, transport, electricity, water, medical facilities etc. at his own cost as required under various labour laws and statutory rules and regulations framed there under to the personnel employed by him.
- 3.3** Provision of distribution lines of both electrical power and water from the central points to the required place with proper distribution boards observing the safety rules laid down by the electrical authorities of the state shall be done by the contractor, supplying all the materials like cables, distribution board, switch boards, TPN, CBS, ELCBS/ MCCBS/ Copper / Brass clamps, copper conductor, change over switches pipes etc. at his own cost. If any failure is caused in supply of the power and water, it is the responsibility of the contractor to make alternate arrangements at his cost. The contractor shall adjust his working shifts / hours accordingly and deploy additional manpower if necessary so as to achieve the targets. **The energy meter to be installed by the contractor & shall be tested**

**and certified by State Electricity Board or any other agency approved by the GVK at his cost.**

- 3.4** The contractor while drawing construction power supply from Distribution Board should strictly adhere to following points.
- a) All electrical installations should be as per Indian Electricity rules.
  - b) All distribution Boards installed by the contractor should be constructed with fireproof materials viz. Steel frames, Bakelite sheets etc.
  - c) Connection for single phase should be taken from phase and neutral. Nowhere the connection should be taken with earth as neutral.
  - d) All electrical connections should be made through connectors, nuts and bolts, switches, plug and sockets. Loose connections or hooking up of wires shall not be permitted.
  - e) Contractor have to make their own earthing arrangement for their equipment / DB earthing.
  - f) All electrical equipment / tools and plants should be properly earthed. DBs to be earthed diagonally opposite at two points.
  - g) Contractor should use "MCCB" and "ELCB" either on incoming or outgoing connections to the DBs.
  - h) Contractor should ensure that all the CBs / TPNs/ Fuses/ MCCB / ELCB cables etc. should be of adequate rating/ capacity.
  - i) For permission of supply connections contractor has to submit a test report of their installations with a single line diagram of connected/ proposed loads.
- 3.5** Adequate lighting arrangement such as flood lights, hand lamps and area lighting shall be arranged by the contractor at the site of construction, storage area etc within finally accepted rates
- 3.6** In case of power cuts / load shedding no compensation for idle labour or extension of time for completion of work will be given to contractor.
- 3.7** The contractor should provide sample testing facilities like chemical lab, chemists and required accessories within the firm price of contract.
- 3.9** **Road permits /Other documents required for despatching their material has to be arranged by the party.**
- 3.10** On completion of work or as and when required by BHEL, all the temporary buildings, structures, pipe lines, cables etc. shall be dismantled and levelled and debris shall be removed, as per instructions of BHEL, by the contractor at his cost. In the event of his failure to do so, the Engineer will get it done and expanses incurred shall be recovered from the contractor along with prevailing overheads. The decision of BHEL Engineer in this regard shall be final.

## **Chapter - IV: T&Ps and MMEs to be deployed by Contractor**

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### **4.0 T&P AND MMD DEPLOYED BY CONTRACTOR**

- 4.1 T&Ps and IMTEs (Inspection, Measuring & Testing Equipment), which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by contractor. In the event of the failure of contractor to bring necessary and sufficient T&Ps/ and IMTEs, BHEL will be at liberty to arrange the same at the risk and cost of contractor and hire charges as applicable shall be deducted from contractor's bill. Decision of BHEL in this regard shall be final and binding on contractor
- 4.2 All distribution boards, connecting cables/ welding cables, wire ropes, hoses etc. including temporary air/ water/ electrical connections etc, shall have to be arranged by the contractor at his own cost.
- 4.3 Contractor shall ensure deployment of reliable and calibrated IMTEs (Inspection, measuring and Test equipment). The IMTEs shall have test/ calibration certificates from authorised/ Govt. approved/ accredited agencies traceable to National/ International standards. Each IMTE shall have a label indicating calibration status i.e. date of calibration, calibration agency and due date for calibration. A list of such instruments deployed by contractor at site with its calibration status is to be submitted to BHEL Engineer for control.
- 4.4 Re-testing/ re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer with in the contract period. The contractor will also have alternate arrangements for such IMTE so that work does not suffer when the particular instrument is sent for calibration. Also if any IMTEs not found fit for use, BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall i.e. repeat the readings taken by that instrument. Failing which BHEL may deploy IMTEs and re-take the readings at contractor's cost.

**Chapter - V: T&P AND MMD DEPLOYED BY BHEL ON SHARING BASIS**

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5.0 T&P AND MMD DEPLOYED BY BHEL ON SHARING BASIS

<b>LIST OF T&amp;P and MMD being provided by BHEL for use of contractor free of hire charges on sharing basis.</b>		
<b>EQUIPMENT</b>	<b>CAPACITY</b>	<b>QTY</b>
Suitable capacity Crane		AS PER REQUIREMENT

## Chapter - VI: TIME SCHEDULE

### 6.0 TIME SCHEDULE

6.1 The contractor is required to commence the work within 15 days from the date of issue of LOI unless BHEL decides to fix any other later date. However, the actual date of start of work, to fix up the zero date of the contract, will be certified by BHEL Engineer after adequate mobilisation of manpower and T&Ps by the contractor.

6.2 Entire work as detailed in the tender specifications for each unit shall be completed within **10 weeks from the date of start of work as per programme/schedule indicated by BHEL Engineer.**

**For each unit likely process time:**

Preparatory works for Pre-Boiler flushing – 15 days approx.

Process Time for Pre-Boiler flushing, rinsing etc. – 5 days approx.

Preparatory works for Chemical cleaning – 25 days approx.

Process Time for Chemical cleaning, sample testing etc. - 5 days

approx.

Aeration of effluents and their disposal- 20 days

Project site	Tentative Schedule (for Unit – I)
Pre Boiler flushing & Chemical Cleaning of Boilers	April, 2012
Note : Tentative time gap between each unit shall be 3 months	

**NOTE:**

The programme of works and period for each unit is to be decided jointly along with BHEL Engineer/ Customer M/s GVK at site depending upon the work fronts availability.

**In case due to reasons not attributable to the contractor, the work gets delayed and additional manpower / resources have to be mobilized so as to expedite the work to meet various milestones, same shall be done within the quoted rates as per Rate Schedule, at no extra cost to BHEL. In the event the contractor fails to respond to these requirements, BHEL shall take appropriate actions to meet customer’s commitments in line with the provisions of General Conditions of Contract.**

6.3 The work under the scope of this contract is deemed to be complete in all respects, only when the contractor has discharged all the responsibilities laid down in the contract. The decision of BHEL on completion date shall be final and binding on the contractor

## Chapter - VII: TERMS OF PAYMENT

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### 7.0 TERMS OF PAYMENT

- 7.1 The 'Engineer' will certify regarding the actual work executed in the measurement books and bills, which shall be accepted by the contractor in measurement book.
- 7.2 Contractor shall submit bills for the work completed under the specification detailing work done. The format for billing shall be approved by BHEL before raising invoices.
- 7.3 Subject to any deduction which BHEL may be authorised to make under the contract, the contractor on the certificate of the Engineer at site is entitled for payment as explained hereunder:

#### **7.3.1 THE PAYMENT FOR EACH OF THE UNIT AWARDED VALUE SHALL BE RELEASED AS PER FOLLOWING;**

- I 95% of proportionate contract value of per unit shall be payable on completion of its work as per contract.

NOTE: BHEL Site in-charge at his discretion can split this 95 % payment, to facilitate site operations.

- II. Balance 5% of contract value of the respective unit shall be payable as under;
- i) 2.5% of the above value of unit shall be payable on completion of all pending work, reconciliation of material wherever required, area cleaning etc.
- ii) The balance 2.5% of the above value of unit will be payable after 3 months on contractors discharging his responsibilities as stipulated in this contract and on passing of final bill. The SD amount, if any, deducted by the BHEL Site from the contractor's RA bills, shall be released along with this final payment.

**Note:** Above payment shall be released after adjustment of the contract value based on actual work carried out.

- III. No separate payment shall be made for any temporary structures, lifting arrangements for testing and other NDT etc., as all these activities shall be performed as integral to erection work as per site requirement and as directed by Engineer.
- 7.4 Interest bearing recoverable Advance: Clause No. 2.13 of GCC shall not be applicable.

## Chapter - VIII: TAXES, DUTIES, LEVIES

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### 8.0 TAXES, DUTIES, LEVIES

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 Service Tax & Cess on Service Tax

Service Tax and Cess on Service Tax as applicable on output Services are excluded from contractor's scope; therefore contractor's price/rates shall be exclusive of Service Tax and Cess on Output Services.

Contractor shall obtain prior written consent of BHEL before billing the amount towards such taxes. The Service Tax Rules permit more than one option or methodology for discharging the liability of tax/levy/duty and BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the

Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor. Contractor shall submit to BHEL documentary evidence of Service Tax registration certificate specifying name of services covered under this contract. For the purpose of claiming any Service Tax from BHEL, the following procedure shall be adopted :

Contractor shall submit serially numbered Service Tax and Cess Invoices, 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 registration number of the contractor
2. The name and address of the party receiving taxable service (BHEL)
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 for payment of Service Tax by BHEL.

Where more than one nature of Service under Service Tax Rules is involved, the invoice mentioned above shall contain the break up of all values for each nature of Service.

## **8.2 VAT (Sales Tax /WCT)**

The rates quoted by the Contractor shall be inclusive of VAT/Sales Tax and BHEL shall not reimburse any amount on this account due to any reason whatsoever.

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.

Deduction of tax at source shall be made as per the provisions of law unless otherwise found exempted.

In case tax is deducted at source as per the provisions of law, this is to be construed as an advance tax paid by the contractor and no reimbursement thereof will be made unless specifically agreed to.

Contractor has to make his own arrangement at his cost for completing the formalities, if required, with Sales Tax/VAT Authorities, for bringing all their material, plant and equipment etc at site for the execution of the work, including arrangement of Road Permits if and as applicable under the relevant VAT Act.

## **8.3 Modalities of Tax Incidence on BHEL**

Wherever the relevant tax laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the contractor.

## **8.4 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 PriceBid. 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.

## Chapter - IX: Others

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### 9.0 OTHERS

#### 9.1 PRICE VARIATION

The price shall remain firm throughout the period of contract. Hence, Price Variation Clause No. 2.17 of GCC shall not be applicable for this tender.

#### 9.2 OVER RUN

9.2.1 In case due to reasons not attributable to the contractor, the work gets delayed and scheduled completion gets extended for individual unit works, the contractor shall not be entitled for any overrun compensation for a period of two weeks after the agreed contractual completion date for the respective unit of the project. In case the agreed scheduled completion time gets extended beyond two weeks as stated above, the contractor shall be considered for payment of fixed over run charges @ Rs. 7,000/- Per Week (Rupees Seven thousand per week only) on receipt of advance notice intending to claim over run & on fulfilment of following condition:-

1. The reasons for delay in completion of work are not attributable to contractor
2. The targets fixed during the overrun period are achieved by contractor.

9.2.2. The overrun charges shall be limited to 10 % of the contract value of each unit.

9.3.3 Extended duration and over run mentioned in above clause no 2.4.1 shall be applicable for the work of individual units separately.

**NOTE: Overrun clause no. 2.12 given in GCC shall not be applicable for this tender.**

**9.3** For reverse auction/ for Price Bid opening, only those bidders will be considered who will be qualified for the subject job on the basis of pre-qualification evaluation/ Techno-commercial bids. BHEL reserves the right to reject the bidders with unsatisfactory past performance in the execution of a contract. BHEL's decision in this regard shall be final & binding.

## Chapter - X: ANNEXURES

### ANNEXURE-I

The information given below is tentative.

**Subcontracting scope of work for pre-boiler flushing and chemical cleaning of boiler (using EDTA) is as follows.**

SL. NO.	ACTIVITY DESCRIPTION
1	Providing all inputs required for erection of temporary system. This includes all T&Ps, IMTEs, materials, SEAMLESS/ERW piping, main pumps with motor, acid transfer pumps, valves, structures, scaffolding, mixing tank, fasteners, cables, distribution boards with necessary controls for operation of pumps, ( including but not limited to the BOM enclosed-- <b>Annexure II</b>
2	Layout involving erection and welding of the system including piping, pumps, tanks, valves, cabling, distribution etc. and connection with the existing system as per the scheme of pre-boiler flushing and chemical cleaning of boiler. <b>The scheme given is tentative and shall be finalized before start of work.</b>
3	All the welding is to be done by qualified and experienced high-pressure welders. Welders shall be subjected to qualification tests at site before deployment on the job as per instructions of BHEL engineer.
4	Required nos. of pumps with capacities as indicated in the BOM shall be installed. Foundation of the pumps shall also be made.
5	Trouble free operation of individual pumps on re-circulation with water for 2 hours each prior to start of process.
6	Providing all the safety equipment, protective clothing i.e. dangree, goggles, face masks, apron, gloves, gum boots etc. and adequate manpower for handling of chemicals, prior to and during the entire process including neutralization.
7	Unloading of chemicals received at site and shifting of the chemicals inside customer premises and their storage till use & disposal of effluents.
8	Execution and supervision of the total process in shifts on continuous basis including lab facilities sampling and analysis during the process.
9	Restoration of the system after removal of temporary system installed earlier.
10	The contractor has to make arrangement for pumping out the spent/ neutralized EDTA after 15 days of aeration from neutralizing pit to a suitable location.
11	Any activity not specified above but required to be carried out for completion of process and Notes on next page .

**NOTES:**

Inputs from the BHEL are limited to the following.

- Supply of Chemicals.
- Power, water, system & compressed air at source.

**Apart from above, all other inputs to be arranged by contractor. The contractor has to provide following -**

1. To ensure availability of instruments as per **BOM (Annexure-II)** duly calibrated for the process with calibration certificates.
2. To ensure availability of sufficient number of spare valves to meet any eventuality during the process.
3. Any leakage in the temporary system, failure of any of pumps etc. forcing stoppage of activity / draining of chemicals shall be attended to by the subcontractor immediately, and the cost of chemicals shall be borne by the subcontractor. If required the complete process will be repeated.
4. To keep the areas clean during the process.
5. Suitable platforms and approaches are to be provided around the mixing tank for stacking chemicals prior to their dozing.
6. The entire system shall be hydraulic tested for passing prior to installation.
7. All valves are to be serviced and tested for passing prior to installation.
8. Cordoning off of area around temporary system and entries to boiler with 'DANAGER' and 'CHEMICAL CLEANING UNDER PROGRESS' posters during chemical cleaning process.
9. Provision of temporary lighting at site.
10. Any statutory clearance, if required, in line with IBR acts from Chief Inspector Boiler, of the state.
11. Testing of chemical samples.
12. Supporting of temporary pipelines at an interval of app. 5M.
13. Steam line, other lines and tank are to be insulated.
14. All Tools and Plants and IMTEs are to be arranged by contractor at his own cost to perform the work.
15. Specified scheme has to be followed until unless specified by BHEL.

**ANNEXURE- II**

**List of Temporary Piping Material & IMTEs for Chemical Cleaning of Boiler and Pre-boiler Flushing at 2X270 MW GVK,Goindwal TPS**  
**Per Unit**

Material ( C/S )

Item Name	Size Nb (ODxThk)	Quantity In Mtrs / Nos	Type	Remarks
PIPE	Nb300mm/12 inch (323x6.35)	6.00		
	Nb250mm/10 inch (273x6.35)	30.00		
	Nb200mm/8 inch (219x6.35)	400.00		
	Nb150mm/6 inch (168x3.40)	10.00		
	Nb100mm/4 inch (114x3.05)	200.00		
	Nb50mm/2 inch (60.32x2.77)	100.00		
	Nb40 (48.26x2.77)	300.00		
	Nb25mm/1 inch (33.40x2.77)	150.00		
	Nb15 mm (26.34x2.11)	150.00		
TEE	Nb300 X 300 X 250	02 Nos		
	Nb200 X 200 X 200	03 Nos		
	Nb100 X 100 X 100	04 Nos		
	Nb50 x 50 x 50	02 Nos		
REDUCER	Nb200 / 150	05 Nos		
	Nb250 / 200	02Nos		
	Nb200 / 100	01 No		
	Nb150 / 100	01 No		
	Nb100 / 80	03 Nos		
	Nb100 / 50	02 Nos		
ELBOW 90°	Nb250mm/10 inch	02 Nos		
	Nb200mm/8 inch	25 Nos		
	Nb150mm/6 inch	03 Nos		
	Nb100mm/4 inch	24 Nos		
VALVE Hand Operated, Butt welded / Socket welded, 150/300 Class	Nb 200	08 Nos	Gate	
	Nb 150	01 Nos	Gate	
	Nb 100	10 Nos	Gate	
	Nb 100	03 Nos	NRV	
	Nb 50	08 Nos	Globe	
	Nb 50	02 Nos	NRV	
	Nb 40	08 Nos	Globe	
	Nb 25	15 Nos	Globe	
	Nb 15	10 Nos	Globe	
FLANGE	Nb 200	04 Nos		
	Nb 150	02 Nos		

MS Tank (covered), rectangular, 30 Cu M with supporting structure for mixing the chemicals No	01
MS Tank (covered), rectangular, 30 Cu M with supporting structure for storage of EDTA No	01
Pump, 150 Cu M / Hr , 12 Kg / cm <sup>2</sup> with strainer, suction bellow, base frame and spares alongwith suitable drive Motor with starter , ammeter, cable etc. with MCC and distribution board Sets	03
Power Cable from source to distribution board	150 Meters
Pump , 20 Cu M / Hr , 05 Kg/ cm <sup>2</sup> along with suitable drive Motor with starter , ammeter, cable etc. with MCC and distribution board	02 Sets
Pump, suitable for pumping from neutralizing pit to atmosphere, alongwith motor	01 Set
PVC Hose Pipe, 50 mm dia	approx. 50 Meters
Mineral wool, 40 mm thick	400 Nos.
<b>Instruments (IMTEs) :</b>	
Pressure Gauge, 0 - 16 Kg / cm <sup>2</sup>	05 Nos
Pressure Gauge, 0 - 06 Kg / cm <sup>2</sup>	03 Nos
Condensing Loop	06 Nos
Thrrmometer , 0 – 100 Deg. C	02 Nos
Peening Type MTM Thermocouples (K type) with pad and compensating cable upto control room	06 Nos
Thermocouple (K type), 1500 mm long with compensating cable upto control room	02 Nos
Drum gauge glass, range 900 mm long	02 Nos.
Temporary Drum level indication at Control Room & near pump Along with cable from drum floor	02 Nos
Safety Appliances	
Laboratory testing equipments and reagents	

### ANNEXURE- III

#### **GENERAL TERMS AND CONDITIONS OF REVERSE AUCTION (RA)**

Against this enquiry for the subject item / system with detailed scope of supply as per our tender specification, BHEL-PSNR, NOIDA may resort to "REVERSE AUCTION PROCEDURE" i.e. **ONLINE BIDDING on INTERNET.**

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. 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.
3. In case BHEL decides to conduct reverse auction, BHEL's service provider shall contact the vendor directly and impart them the training.
4. Business rules like event date, time, start price, bid decrement, extensions, etc. also will be communicated through service provider for compliance.
5. Vendors have to fax the compliance form in the prescribed (provided by service provider) before start of Reverse auction. Without this the vendor will not be eligible to participate in the event.
6. **Total Price quoted shall be inclusive of all taxes except service tax in line with the NIT conditions for the subject work in Indian Rupees (INR), which is to be worked out as per the BOQ (Rate Schedule) given in tender enquiry and subsequent changes made, if any. EXCEL Sheet shall be provided, if applicable.**
7. Reverse auction will be conducted on schedule date & time.
8. At the end of reverse auction event, the lowest bidder value will be known on the network.
9. The lowest bidder has to fax the duly signed filled-in prescribed format as provided on case-to-case basis to BHEL through service provider after completion of event on the same day preferably. BHEL shall reserve the right for award of work to the lowest bidder.
10. Any variation between the on-line bid value and signed document especially if the online opening bid price is found more than the price in submitted sealed bid, it will be considered as sabotaging the tender process and may invite disqualification of vender to conduct business with BHEL as per prevailing procedure.
11. 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 standard practice.

ANNEXURE – IV

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

1	NAME & DESIGNATION OF OFFICIAL	
2	POSTAL ADDRESS (COMPLETE)	
3	TELEPHONE NOS. (LAND LINE & MOBILE BOTH)	
4	FAX NO.	
5	E-MAIL ADDRESS	
6	NAME OF PLACE/ STATE/ COUNTRY, WHEREFROM S/HE WILL PARTICIPATE IN THE REVERSE AUCTION	

## Chapter - XI: UNPRICED RATE SCHEDULE

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SI. No	DESCRIPTION OF WORK	QTY	Rate in Rupees per Unit (In figures and words)	Total Amount in Rupees
1	<b>Lumpsum price</b> for carrying out Pre-boiler flushing & Chemical cleaning of Boilers at 2x270 MW GVK, Goindwal TPS.(For two units).	<b>02</b>	/	
<b>TOTAL(In Rs.)</b>				

**NOTES:**

- 1 The quantities indicated above are tentative and are liable to vary depending upon the site requirement. The contractor has to handle / erect / commission all the items indicated by BHEL for achieving the milestones and completion of work.
- 2 Evaluation of bids shall be done on total price against this Rate Schedule / BOQ.
- 3 In case of any mismatch in Rate and amount on Price discrepancy, the same will be dealt as per clause No. 1.4 of GCC.

(Signature, date & seal of authorized representative of the bidder)