

E-TENDER

for

“Design, Supply and Expert Supervision for installation works of Borosilicate Glass Block Lining for chimney flue can & duct transition piece including Wet Stack Flow Model Study at 2x500 MW NTPC Sipat Stage II FGD Project.”

Tender No: 2201086



BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR WESTERN REGION



CONTENTS			
Volume No	Description	Hosted in website www.bhel.com (Briefly) and detailed in BHEL e-Procurement Portal as files titled	Pages
NIL	Notice Inviting Tender	Part of Vol_IA_Tech_Bid_NIT_Borosilicate_TCC_SCC	28
IA	Technical Conditions of Contract	Part of Vol_IA_Tech_Bid_NIT_Borosilicate_TCC_SCC	33
IA	Special Conditions of Contract	Part of Vol_IA_Tech_Bid_NIT_Borosilicate_TCC_SCC	13
IA	BOQ	Part of Vol_IA_Tech_Bid_NIT_Borosilicate_TCC_SCC	1
IA	Integrity Pact	Part of Vol_IA_Tech_Bid_NIT_Borosilicate_TCC_SCC	6
IA	Annexure-A	Annexure_A_Vol_IA_TCC	33
IB	General Conditions of Contract including Forms and Procedures	Volume_IB_GCC_2201086	53
IC	Check List	VolICCheckList2201086	-
IC	Declarations	VolICDeclarations2201086	-
IC	PQR Response	VolICPQRResponse2201086	-
ID	Unpriced bid	VolICUnpricedbid2201086	
II	Volume – II	Price Bid 2201086	-

NOTICE INVITING TENDER (NIT)

BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR WESTERN REGION



TENDER**Volume – IA: Technical Bid**E - Tender No: 2201086 Date **15-10-2022** comprising of following:

Salient Details of NIT		
S. No.	Issue	Description
1.	Job	Design, Supply and Expert Supervision for installation works of Borosilicate Glass Block Lining for chimney flue can & duct transition piece including Wet Stack Flow Model Study at 2x500 MW NTPC Sipat Stage II FGD Project.
2.	E - Tender No	2201086
3.	Details of Tender Document	
3.1	Volume_ I A	<ul style="list-style-type: none"> ❖ Technical Conditions of Contract (TCC) ❖ Special Conditions of Contract (SCC) ❖ Annexure-A Vol-IA-TCC
3.2	Volume_ I B	<ul style="list-style-type: none"> ❖ General Conditions of Contract (GCC)
3.3	Volume_ I C	Techno-Comml – Compliance <ul style="list-style-type: none"> ❖ Vol IC Check List 2201086 ❖ Vol IC Declarations 2201086 ❖ Vol IC PQR Response 2201086 ❖ Vol ICUncpriced bid
3.4	Volume_II	<ul style="list-style-type: none"> ❖ Price Bid
4.	Issue of Tender Documents	From BHEL website (www.bhel.com) and https://eprocurebhel.co.in/nicgcp/app (Tender documents will be available for downloading from BHEL e-Procurement website till due date of submission)
5.	Due Date Of Offer Submission	Date: 25-10-2022 Time: 14:00 hrs https://eprocurebhel.co.in/nicgcp/app Offer to be submitted in online only through e-procurement Portal. (Bidders are requested to visit website to view corrigendum/ addenda/ amendments/ extension/ modification to PQ etc in the form of TCN before submitting offer).
6.	Opening of Tender	Date : 25-10-2022 Time : 17:00 Hrs Notes:

Salient Details of NIT		
	(Techno-Commercial Bid)	<i>This tender being an e-tender, it shall be opened online only through the E-Procurement Portal. Participating bidders may witness the Opening online only.</i>
7.	Cost of Tender	Not Applicable
8.	Bid Security Declaration	Bid Security Declaration is mandatorily required to be submitted by bidders
9.	Earnest Money Deposit (EMD)	Not Applicable
10.	Schedule Of Pre-Bid Discussion	Not Applicable
11.	Reverse Auction	Applicable
12.	Evaluation Currency	INR
13.	Last Date of Seeking Clarification	22-10-2022 Along with soft version also, addressing to undersigned & to others as per contact address given below. <i>Bidders may consider to seek clarifications on the e-tender portal---</i> https://eprocurebhel.co.in/nicgep/app
14.	Integrity Pact & Details of Independent External Monitor (IEM)	As per Integrity Pact Document Shri Otem Dai, IAS (Retd.) Email: iem1@bhel.in Shri Bishwamitra Pandey, IRAS (Retd.) Email: iem2@bhel.in Shri Mukesh Mittal, IRS (Retd.) iem3@bhel.in
15.	Latest Updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc. to Tender Specifications will be hosted in BHEL webpage (www.bhel.com -->Tender Notifications →View Corrigendum(s) & on e-tender portal https://eprocurebhel.co.in/nicgep/app and not in the newspapers. Bidders to keep themselves updated with all such information

- 1.0 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 **digitally** signed, 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. Unsolicited discounts received after opening of techno-commercial bids shall not be considered for evaluation.**
- 2.0 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. ~~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.~~ Copy of ~~Cash receipt~~ or the proof of Demand Draft duly **digitally** signed is to be uploaded with the Techno Commercial offer **on e-tender portal <https://eprocurebhel.co.in/nicgep/app>**. However Original Demand Draft shall be sent to the officer inviting tender within a reasonable time failing which the offer is liable to be rejected. ~~Sale of tender Documents shall not take place on National Holidays, holidays declared by Central or State Governments and BHEL PS HQ at _____, Sundays and second/ last Saturdays.~~

3.0 **E-Procurement Portal Inputs**

Procedure for Submission of Offer for E – Tender

Procedure for Submission of Tender is available in the "Bidder Manual for BHEL Bidders" at E-tender portal <https://eprocurebhel.co.in/nicgep/app>. Terms and conditions mentioned therein shall form integral part of the NIT and bidders shall abide by the same.

i. **Hardware and Software requirements for participating in e-tender**

- ❖ Please refer the website for the minimum system requirements and setting document for Bidders under the link: <https://eprocurebhel.co.in/nicgep/app>

ii. **Digital Signature**

- ❖ To know the procedure for obtaining Digital Signature Certificate (DSC), suppliers who are not having the DSC are advised to visit our website <http://www.bhel.com/home.php> → Tender Notifications → Sample Checklist.

iii. **NIC portal Helpdesk Contacts**

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

0120-4001 002

0120-4200 462

0120-4001 005

0120-6277 787

International bidders are requested to prefix 91 as country code

Email Support

Address: A) For any Issues or Clarifications relating to the published tenders, bidders are requested to contact the respective Tender Inviting Authority

Technical - support-eproc@nic.in

iv. **Note**

- i. Offers/tenders submitted in the E-tender portal shall only be considered for further evaluation. Offers sent by FAX / E-mail / any mode other than E-tender would not be entertained.

The Tenderers must submit their Tenders, as detailed below:

- ❖ PART-I consisting of 'PART-I A (Techno Commercial Bid)' & 'PART-I B (EMD/COST of TENDER)'
- ❖ PART-II (Price Bid)

SPECIAL NOTE: All documents/ annexures to be submitted should be uploaded in respective places in the E-Tender portal as per the list mentioned given in this NIT. BHEL shall not be responsible for in-complete documents.

- 4.0 No Deviation with respect to tender clauses and no additional clauses/ suggestions/ clarification in Techno-commercial bid/ Price bid shall normally be considered by BHEL. Bidders are requested to positively comply with the same.
- 5.0 BHEL reserve the right to accept or reject any or all offer without assigning any reasons thereof. BHEL also reserve 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). However, BHEL may communicate rejection to the unsuccessful bidder after award of work and acceptance by the successful bidder.
- 6.0 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.
- 7.0 For any clarification on the tender document, the bidder may seek the same in writing or through e-mail or **through E-tender Portal**, 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.

- 8.0 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.
- 9.0 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.
- 10.0 Unless specifically mentioned otherwise, bidder's quoted price shall be deemed to be in compliance with tender including PBD, if any.
- 11.0 Bidders shall submit Integrity Pact Agreement (Duly digitally 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. Detail of Independent External Monitor (IEM) for the subject tender is furnished above.
- 12.0 The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of evaluation on pre-qualification criteria/ techno-commercial bids, approval/ acceptance of customer (as applicable), etc. BHEL's decision in this regard shall be final & binding. BHEL also reserves the right to reject bidder with unsatisfactory past performance in execution of a contract. BHEL reserves the right not to consider offers of parties under HOLD. BHEL's decision in this regard shall be final & binding.
- 13.0 Tenders must adhere to all volumes of tender and quote accordingly. Any terms & conditions not covered in SCC, will be governed by GCC.
- 14.0 Validity of the offer shall be for Six months from the latest due date of offer submission.**
- 15.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
- 16.0 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.

- 17.0 The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.
- 18.0 The bidder shall submit/upload documents in support of possession of 'Qualifying Requirements' duly self-certified and stamped by the authorized signatory (through Digital Signature), as per the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately.
- 19.0 The bidder may have to produce original document for verification if so decided by BHEL.
- 20.0 In the course of evaluation, if more than one bidder happens to be L-1, effective L-1 will be decided by soliciting discounts from the respective L-1 bidders. In case more than one bidder happens to be the L-1 subsequent to soliciting discounts, the L-1 bidder shall be decided by a toss/ draw of lots, in the presence of the respective L-1 bidder(s) or their authorised representative(s). Ranking will be done accordingly. BHEL's decision shall be final and binding in such situations.

21.0 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. Description in BOQ cum Rate Schedule
- c. Technical Conditions of Contract
- d. Special Conditions of Contract
- e. General conditions of Contract

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 Pur)

IMPORTANT INFORMATIONS

All correspondences regarding this tender shall be addressed to AGM / PURCHASE BHEL PSWR through BHEL [e-procurement portal](#) only. Following are the concerned BHEL officials to whom bidders can contact in case of any difficulty:

- ❖ GM Purchase, Email id: rmalhotra@bhel.in. Ph: +91 – 712 – 2858633
- ❖ Manager Purchase, Email: ncsharma@bhel.in, Ph: +91 – 712 – 2858635
- ❖ Manager Purchase, Email: rajivkumar@bhel.in, Ph: +91 – 712 – 2858717
- ❖ Engineer Purchase, Email id: jayant@bhel.in , Ph: +91 – 712 – 2858635

1. Guidelines for Suspension of Business Dealings with Suppliers/ Contractors

The offers of the bidders who are under suspension as also the offers 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.

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

1.1 Commitment by BHEL:

BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.

1.2 Commitment by Bidder/ Supplier/ Contractor:

1.2.1 The bidder/ supplier/ contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.

1.2.2 The bidder/ supplier/ contractor will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.

1.2.3 The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.

If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860

or any other law in force in India, then, action may be taken against such bidder/ supplier/ contractor as per extant guidelines of the company available on [www. bhel.com](http://www.bhel.com) and/or under applicable legal provisions.

Suspension of Business Dealings

- ❖ It may please be noted that guidelines/rules in respect of suspension of business dealings', 'Vendor evaluation format' etc. may undergo change from time to time and the latest one shall be followed.
- ❖ The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site (www.bhel.com ---> Tender Notification - List of Banned Firms).
- ❖ Abridged version of the extant 'Guidelines for suspension of business dealings with suppliers/ contractors' has been uploaded on www.bhel.com on "supplier registration page" at the following link: http://www.bhel.com/vender_registration/pdf/Suspension_guidelines_adbridged.pdf

2. All Statutory Requirements as applicable for these Projects shall be complied with

3. BHEL Fraud Prevention Policy

"The Bidder along with its associate/ collaborators/ sub-contractors/ sub-vendors/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as so on as it comes to their notice."

4. The language in the tender documents downloaded by the Bidders shall at no point of time be changed, altered or modified in any manner by the Tenderer. If such changes are made by any tenderer, it shall be considered as tampering with BHEL's terms and the offer shall be summarily rejected, whenever it is noticed by BHEL. Such Bidders would be disqualified from the Bidding Process and their offers would be forfeited / Bank Guarantees invoked. They would also not be allowed to take part in future tenders of BHEL.

5. Performance Bank Guarantee/ Bank Guarantee

Where ever so required, the Supplier shall arrange to provide a Performance bank guarantee (PBG). The indigenous suppliers have to provide the PBG from any one of the Nationalized Banks, listed in the tender terms. However, the PBG shall be confirmed by any of the Bankers listed by us. The PBG shall guarantee the performance of the equipment / materials / items supplied and shall cover the guarantee period. The PBG shall have a claim period of 3 months in addition to the guarantee period. In the event of failure of the supplies made within the guarantee period, BHEL would encash the entire PBG. The PBG shall be for a value as cited in the tender document.

The supplier (/s) has to get the PBG format (pre-printed) from BHEL and get the same stamped by the Banker. Change of PBG terms either by the supplier's Banker or by the supplier, after servicing of the order

is not acceptable. Similarly, PBG prepared by the supplier (typed by them) will also not be acceptable to BHEL. The pre-printed form issued by BHEL shall be used for making the PBG.

Acceptance of Bank Guarantee (BG) / Performance Bank Guarantee issued by:

- a. Any of the BHEL consortium bank listed below:

Sl.	Name of the bank
1	State Bank of India
2	Canara Bank
3	Axis Bank
4	Bank of Baroda
5	Central Bank
6	Citi Bank N.A.
7	Deutsche Bank **
8	Exim Bank
9	Federal Bank Limited
10	HDFC Bank Limited
11	Hongkong and Shanghai Banking Corporation Ltd
12	Indian Bank
13	ICICI Bank Limited
14	IDBI Bank Limited
15	IndusInd Bank Limited
16	Indian Overseas Bank
17	Kotak Mahindra Bank Limited
18	Punjab National Bank
19	RBL Bank Ltd.
20	Standard Chartered Bank
21	Union Bank of India
22	Yes Bank Limited

- b. Any public sector Bank (other than consortium banks) with a clause in the text of Bank Guarantee that it is enforceable at Nagpur, Maharashtra
- c. Any private sector banks, with a clause in the text of Bank Guarantee that it is enforceable by being presented at any branch of the bank

Note: "Bank Guarantees issued by Co-operative Banks are not acceptable".

- d. This PBG clause is a general clause and valid wherever BG (Bank Guarantee) / PBG (Performance Bank Guarantee) / CEBG (Contract Execution Bank Guarantee) is applicable
- e. **List of banks may change from time to time, thus prior to submission of Bank Guarantee it is responsibility of successful bidder to get the confirmation of issuing Bank from BHEL.**

6. Reverse Auction Terms & Conditions

- BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among the techno commercially qualified bidders.
- Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.

7. MSE Vendors:

Micro & Small Enterprises (MSE) is exempted from Payment of Tender Fees and Earnest Money deposit (EMD).

Definition of MSME: - As per Gazette Notification no. S.O. 2119(E) dated 26.06.2020 issued by Ministry of MSME regarding change in definition of Micro, Small & Medium Enterprises (MSMEs) applicable w.e.f. 01.07.2020. According to the notification, following criterion is envisaged for definition of MSMEs:-

S. No.	Type of Enterprise	New Criterion/ Definition
1	Micro	a micro enterprise, where the investment in plant and machinery or equipment does not exceed one crore rupees and turnover does not exceed five crore rupees
2	Small	a small enterprise, where the investment in plant and machinery or equipment does not exceed ten crore rupees and turnover does not exceed fifty crore rupees
3	Medium	a medium enterprise, where the investment in plant and machinery or equipment does not exceed fifty crore rupees and turnover does not exceed two hundred and fifty crore rupees

The above shall be applicable to this tender and relevant documents (Udyam Registration Certificate) must be submitted to establish the MSME status by the bidder failing to which the bidder shall be considered on par with other non-MSME bidders.

8. Earnest Money Deposit (EMD): Not Applicable

8.1 ~~Refundable, Non-interest bearing Earnest Money Deposit (EMD) of Rs. NIL/- (Rupees NIL only) is applicable for this Enquiry.~~ Micro & Small Enterprises (MSE) is exempted from EMD. (refer pt. 7. above for "MSE vendors"). EMD can be deposited in any one of the following methods along with the technical bid, failing which bidder's offer is liable for rejection.

Modes of Deposit

- ❖ Cash Deposit as permissible under the extant Income Tax Act (before tender opening)
- ❖ Banker's Cheque/ Pay Order/ Demand Draft, in favour of Bharat Heavy Electricals Ltd, payable at Nagpur (along with offer)
- ❖ Electronic Fund Transfer credited in BHEL PSWR, Nagpur account (before tender opening); Bank account details of BHEL PSWR is cited below for EMD remittance purpose

Name of the company	Bharat Heavy Electricals Ltd
Address of the company	Shree Mohini Complex 345, Kingsway, Nagpur - 440001
Name of Bank	State Bank Of India
Name of Bank Branch and Branch Code	SBI, Nagpur Main Branch, Branch Code-00432
City	Nagpur
Account number	40227423158
Account type	Current A/C
IFSC code of the bank branch	SBIN0000432
MICR code of the bank branch	440002002

- ❖ No other form of EMD remittance shall be acceptable to BHEL.

Procedure for Earnest Money Deposit		
Mode of Submission	Proof of EMD along with the offer	Submission of EMD to BHEL PSWR
❖ DD/Pay Order	Scan Copy has to be uploaded in E-Portal	Original DD/ Pay Order to be couriered to BHEL PSWR, Nagpur before tender opening
❖ EFT	Receipt of Amount Transferred to BHEL Account	
❖ Cash	Receipt of cash deposit at BHEL office	

- ❖ No other form of EMD remittance shall be acceptable to BHEL.

Procedure for Earnest Money Deposit		
Mode of Submission	Proof of EMD along with the offer	Submission of EMD to BHEL PSWR

❖ DD/Pay Order	Scan Copy has to be uploaded in E-Portal	Original DD/ Pay Order to be couriered to BHEL PSWR, Nagpur before tender opening
❖ EFT	Receipt of Amount Transferred to BHEL Account	
❖ Cash	Receipt of cash deposit at BHEL office	

Proof of Demand Draft/ Pay Order or receipt of Electronic Fund Transfer duly **digitally** signed is to be uploaded with the Techno Commercial offer **on e- tender portal** <https://eprocurebhel.co.in/nicgep/app>.

In case, bidder wishes to furnish EMD in Demand Draft/ Pay Order mode, Original Demand Draft/ Pay Order shall be sent to the officer inviting tender within a reasonable time failing which the offer is liable to be rejected.

EMD given by all unsuccessful Tenderers shall be refunded on acceptance of award / LOI/PO by successful Tenderer. The EMD of successful bidder shall be returned after submission of Performance Bank Guarantee (PBG) or Contract Execution Bank Guarantee (CEBG), as the case may be.

EMD by the Tenderer will be forfeited as per NIT conditions, if after opening and within the offer validity period, the tenderer revokes his tender or makes any modification in his tender which is not acceptable to BHEL.

EMD by the tenderer shall be withheld in case any action on the tenderer is envisaged under the provisions of extant "Guidelines on Suspension of business dealings with suppliers/ contractors" and forfeited/ released based on the action as determined under these extant guidelines.

9. **PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA) CLAUSE:**

"For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/ Non-local supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT".

10. **Only Class-I Local Supplier and Class-II Local supplier are eligible to participate in this tender inline with Cl. 3(b) of MII Circular No. P-45021/2/2017-PP (BE-II), Dated 16/09/2020.**

Minimum 50% Local content required for Class-I Local Supplier and Minimum 20% Local content required for Class-II Local Supplier for MII compliance against this tender.

11. In compliance with order issued by "Department of Expenditure's (DoE) Public Procurement Division ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020, following restriction is hereby ordered under rule 144(xi) of the General Financial Rules (GFRs)2017 :

Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.

A bidder is permitted to procure Raw Material, component, Sub-Assemblies etc. from the vendors from countries which share a land border with India. Such Vendors will not be required to be registered with the Competent Authority i.e DPIIT.

In case a bidder has proposed to supply finished goods directly/Indirectly from vendors from the countries sharing land border with India, Such vendor will be required to be registered with the competent Authority.

However, a bidder from a country which shares a land border with India, if falling under Clause 8 of DoE OM dated 23/07/2020 will be eligible to bid only if the bidder is registered with competent Authority.

12. **GeM Seller ID:**

Bidder participating in the subject tender is requested to get registered in "**Government e-Marketplace**" (GeM). This is one of the pre-requisite criterion for the **Order Placement**. GeM Seller ID shall be provided in the document "VollCCheckList2201086".

13. Bidder should have valid PAN. Relevant document in support of above shall be submitted.

14. **Short Closure:** BHEL may short close the contract at any stage without assigning any reasons.

Format – I

(To be submitted in the bidder's letter head)

In-line with Department of Expenditure's (DoE) Public Procurement Division Order vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020

Tender Specification No:

Tender Description:

"I/ we have read the clauses pertaining to Department of Expenditure's (DoE) Public Procurement Division Order (Public procurement no 1, 2 & 3 vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020) regarding restrictions on procurement from a bidder of a country which shares a land border with India. I/We hereby certify that I/ we the bidder < name of the

bidder.....
.....> is / are

a) Not from such a country and eligible to be considered for this tender.

OR

b) From such country, has been registered with the competent authority and eligible to be considered for this tender. (Evidence of valid registration by the competent authority shall be attached)

For and behalf of _____ (Name of the bidder)

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

Format - II

Bid Security Declaration Form

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

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir/Madam,

Sub: Bid Security Declaration

Ref: Tender Specification No:

Tender Description:

1. I/We Mr/ Ms..... authorised person to sign the bid documents for tender pertaining to the captioned scope do hereby declare that I/We have gone through the entire tender documents including terms and condition mentioned in the tender documents and undertake to comply with them.
2. I/We further declare that we will not withdraw our bid or modify our offer during the period of validity of the bid after the deadline for submission of such documents.
3. If I/we withdraw or modify the bids during the period of validity, or if I/We are awarded the contract and fail to sign the contract, if applicable or to submit security deposit as defined in the tender document/LOA, we will be suspended for the period of time as specified in the tender document from being eligible to submit bids/proposals to BHEL.

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

Place:

Date:

Format - III

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

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

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

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

Ref: 1) **Tender Specification No:**

2) All other pertinent issues till date

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

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

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

...
...
...

Thanking you,
Yours faithfully,

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

** - Strike out whichever is not applicable.

Note:

- 1. Bidders to note that above format Duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.

2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

Format – IV (a)

Undertaking for Indian Bidders

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

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir/Madam,

Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS

Ref: Tender Specification No:

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

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

Place:

Date:

Format - V
DECLARATION

Date: _____

To _____
 BHEL, _____

Email: _____

Sub: **Details of related firms and their area of activities**

Dear Sir/ Madam,

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

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

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

Regards,
(_____)

From: M/s _____
 Supplier Code: _____
 Address: _____

Format – VI

Declaration for prevention/elimination of suspected cartel formation between suppliers

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

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir/Madam,

Sub: Declaration for prevention/elimination of suspected cartel formation between suppliers

Ref: Tender Specification No:

I/We hereby declare that I/We will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s).

This applies in particular to prices, specifications, certifications, subsidiary contract, submission or non-submission of bids of any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

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

Place:

Date:

I. Pre-Qualification Criteria (PQR)

Bidder shall essentially meet all the Qualifying Requirements cited below:

A.1	<p><u>Technical</u></p> <p>The Bidder must be the Manufacturer / Manufacturer's Authorized Supplier of "Borosilicate Glass Block Lining system".</p> <p>Note:</p> <ol style="list-style-type: none"> 1. If the Manufacturer directly participating in the bid, then authorised supplier of the Manufacturer cannot be considered as the bidder. 2. If authorised supplier of Manufacturer is participating, then Manufacturer should have given an authorization letter to his authorised supplier for the supply of full quantity mentioned in bid of "Borosilicate Glass Block Lining system". 3. One Manufacturer can only give authorization letter to only one Authorised Supplier.
A.2	<p>The bidder should have supplied "Borosilicate Glass Block Lining system of minimum 38 mm thickness" which should have been in successfully operation in at least one (01) Chimney for a period not less than one (01) year as on date of Techno – Commercial bid opening.</p>
	<p>The Bidder shall furnish the following supporting documents for assessment of Bidder w.r.t. PQR.</p>
1.	<p>Bidder shall furnish the Purchase Order copy / Supporting documents of at least one executed Contracts as mentioned above at Point 'A'.</p>
2.	<p>Documents against proof of Supply issued by Owner (Corresponding Certificate issued in the name of the bidder) for successful operation of 'Borosilicate Glass Block lining system' as mentioned above at Point 'A'.</p>
3.	<p>Performance certificates issued by Owner for executed contract for at least one year indicating Project name, Date of Issue of Certificate, Date of Operation and Name/Designation of the Certificate issuer.</p>
4.	<p>Any additional document required in support of the above documents to establish the correlation between the above documents and the supplied items shall be provided by the Bidder.</p>
B.	<p><u>Financial Turnover</u></p> <p>Bidders must have achieved an average annual financial turnover (Audited) of Rs. 5.12 Crore or more, over the last three Financial Years (FY) i.e. '2019-2020, 2020-2021 and 2021-2022'.</p>
C.	<p><u>Submission of Integrity Pact duly signed (IP)</u></p> <p>The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in bidding.</p>

	In other words, entering into this pact would be a preliminary qualification
D.	<p>Customer Approval</p> <ul style="list-style-type: none"> ❖ Credentials of the bidders meeting the Pre-Qualifying requirements and techno-commercially qualified shall be forwarded to customer for their approval ❖ The Price Bid of bidders who are approved by customer shall be opened and considered for further evaluation.

Explanatory Notes for PQR

1. For Sl. No. A.1 & A.2 the Borosilicate Glass Block lining system means Supply of Borosilicate Glass Block, Adhesive Membrane and Epoxy Primer.
2. Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document certified by any reputed agency should also be submitted.
3. Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder /collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
4. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated against Financial Turnover QR above along with all annexures.
5. In case of audited Financial statements have not been submitted for all the three years as indicated against Financial Turnover QR 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.
6. If financial statements are not required to be audited statutorily, then instead of audited financial statements, financial statements are required to be certified by Chartered Accountant or Certified Accountant.
7. Consortium bidding is not allowed.
8. After satisfactory fulfillment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all other terms of the tender subject to customer's approval.
9. **Declaration regarding Insolvency/ Liquidation/ Bankruptcy proceedings**

Bidder must not be under Bankruptcy Code Proceedings (IBC) by NCLT or under Liquidation / BIFR, which will render him ineligible for participation in this tender, and shall submit undertaking to this effect.

10. **Credentials furnished by the bidder against “PRE QUALIFYING CRITERIA” shall be verified from the issuing authority for its authenticity. In case, any credential (s) is/are found to be spurious, offer of the bidder is liable to be rejected and BHEL reserves the right to initiate any further action as per its internal guidelines.**
11. **Relaxation in Pre-Qualifying Requirement (PQR) for Micro and Small Enterprises (MSE's) and Startups:**
- a) **Technical Pre Qualifying Requirement (PQR) for prior experience:** The technical pre-qualifying requirements, is relaxed by 50% (quantities or amount) of the original Pre –Qualifying Requirement specified in the tender (round off to the higher limit or number. Further, if the required quantity as per Original PQR is only one (1), then relaxed PQR shall also remain the same, since quantity is non-divisible in this case.)
 - b) **Financial Pre Qualifying Requirement (PQR) including Turnover:** The financial pre-qualifying requirements is relaxed by 50% of the original Pre –Qualifying Requirement specified in the tender.
 - c) Other Pre-Qualifying requirements such as Machineries, BIS, or any form of licenses or customer approval or requirements other than stated in **Point no. (a) and (b)** above, shall remain the same for all bidders.
 - d) Definition of Startup shall be in line with Gazette Notification No DL 33004/99 dated 19.02.2019 and subsequent amendments, if any.

II. Pre-Qualification Criteria (PQR) for Wet Stack Flow Model Study

Bidder shall essentially meet all the Qualifying Requirements cited below:

A	The Bidder/Bidder's agency should have successfully performed at least one (1) wet stack flow Model Study, in a coal fired power plants, of wet stack installed after wet limestone based FGD absorber (without reheating of cleaned flue gas), and based on the studies developed at least one(1) wet stack liquid collection systems which are in successful operation for a period of at least one (1) year as on date of Techno – Commercial bid opening.
	The Bidder shall furnish following supporting documents for assessment of Bidder w.r.t. PQR
1.	In case, the bidder engages an agency for conducting the wet stack flow model study then an authorized letter from that agency must be provided citing the agreement between the bidder and agency and such letter shall comprise of all the Projects that requires Wet Stack Flow Model Study
2.	Experience list of Bidder/Bidder's agency of wet stack flow model study for last 10 years
3.	Bidder shall furnish the Purchase Order copy/ Study Reports/ Support Documents of at least one executed contract as indicated in the experience list
Bidder shall furnish the following in support of Successful Completion of Wet Stack Flow Model Study and design of the condensate collection system:	
1.	Performance feedback certificates issued by owner for Executed Contract in last Ten years from the latest date of Part-I bid opening which has been successfully in use for at least one year indicating Project Name, Date of Issue of Certificate, Date of Operation and Name/ Designation of the Certificate Issuer.

Note:

- A. Purchase Order copy, support drawings and documents/ technical details etc. are to be submitted along with the bid, for which the bidder intends to furnish the Performance feedbacks, for reference purpose only.
- B. Any additional document required in support of the above documents to establish the correlation between the above documents and the supplied items shall be provided by the bidder.
- C. Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document certified by any reputed agency should also be submitted.
- D. Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder /collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.

- E. After satisfactory fulfilment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all other terms of the tender subject to customer's approval.



TECHNICAL CONDITIONS OF CONTRACT (TCC)

“Design, Supply and Expert Supervision for installation works of Borosilicate Glass Block Lining for chimney flue can & duct transition piece including Wet Stack Flow Model Study at 2x500 MW NTPC Sipat Stage II FGD Project.”

BHARAT HEAVY ELECTRICALS LIMITED



Technical Conditions of Contract (TCC) Contents

S. No.	Description
Volume-IA	Part-I: Contract specific details
1	Project Information
2	General Scope of Works
3	Facilities at Site
4	Time Schedule
5	Terms of Payment
6	General
7	Technical specification for Borosilicate Glass Block Lining System
8	Technical specification for Wet Stack Flow Model Study
	Annexures
A	Technical Specification No. PE-TS-426-620-C002 , Section D, Sub-section D26
B	Technical Specifications for Wet Stack Flow Model Study
C	Drawing of duct transition piece

Technical Conditions of Contract (TCC)

Chapter – I Project Information

1.0 Project Information

INTRODUCTION:

Sipat Super Thermal Power Project (Coal Based) stage-II (2X500MW) is set up in the state of Chhattisgarh, located near Sipat in Bilaspur district. The capacity of the project in Stage-II is 1000 MW comprising of 2 x 500 MW units and the ultimate capacity of the project is 2980 MW (3X660 + 2X500 MW).

LOCATION AND APPROACH

The site is located east of the Kurung left bank canal and is bounded by villages Rank, Kaudia and Janji in the Bilaspur district of Chhattisgarh. It is in between latitudes 22*05' & 22*09' North and longitudes 82* 16' & 82* 18' East. The site is approx. 20 kms. from Bilaspur city and is approachable via the Bilaspur - Sipat state highway which takes off to the North-East from Bilaspur City. The nearest railway station is Jairamnagar on the Nagpur-Raipur-Calcutta mainline. Raipur, which is approximately 140 kms. from the site is the nearest commercial airport.

Above information furnished are for general guidance of Contractor. However, Contractor is advised to visit the site and appraise himself about the conditions of site and infrastructure available in the area for fulfilling their commitments under the contract.

Technical Conditions of Contract (TCC)

Chapter – II Scope of Work

2.0	GENERAL SCOPE OF WORK
2.1	Design, Supply and Expert Supervision for installation works of Borosilicate Glass Block Lining for chimney flue can & duct transition piece including Wet Stack Flow Model Study as per BOQ at 2x500 MW NTPC Sipat FGD Stage II project as mentioned below:
2.2	<u>Brief Scope of Work:</u>
2.2.1	<p><u>Supply:</u></p> <p>The scope of work includes but not limited to design, engineering, supply of material and services required for completion of the work scope as follows:</p> <p>A. Supply of Borosilicate Glass Block Lining system consisting of 38 mm thick closed cell glass block lining material confirming to physical & chemical properties mentioned in technical specifications, handling, storage & transportation up to CIF Mumbai (for foreign bidders) /FOR Site (for Indigenous bidder) including required epoxy primer and adhesive membranes etc. for application of borosilicate glass block lining over mild steel flue liners & duct transition piece with adequate packing all complete. It is bidder's responsibility to assess and furnish material including wastage etc. necessary to complete the work covered in this scope unless otherwise stated.</p> <p>B. The square meter area indicated for Sipat FGD Project for application of borosilicate glass block is tentative and may vary in case of change in design/application requirements. In case of any increase/decrease in the area in square meters the same shall be intimated before supply of borosilicate glass block, adhesives, membranes and primer etc. and the Lump Sum Price quoted shall be adjusted in proportion to the decrease/increase in the surface area. However, the pro-rata rate worked out for per square meter surface area shall be firm. The Adjustment in price of BOQ item no. 1 shall be made after deducting the price of Mixing Machine and Special T&P /Tools/Tackles (If any). The price of Mixing Machine and Special T&P /Tools/Tackles shall be considered as 0.5% of the total cost of BOQ Item no. 1 for payment purpose.</p>

Technical Conditions of Contract (TCC)

Chapter – II Scope of Work

- C. The bidder shall provide details of total quantities of borosilicate glass block, adhesives, membranes and primer required for installation of borosilicate glass block lining over the indicated surface area of the chimney flue liners & duct transition piece (as per details furnished in tender specifications/subsequent variations, if any) according to their detailed engineering. **The Bidder shall submit the Billing Break-up (BBU) indicating the total quantities and Unit of Measurement for the indicated surface area for approval of BHEL. The Bidder shall also intimate the per square meter quantities of borosilicate glass, adhesives, membranes and primer required for application as per specifications.**
- D. The payment for supplies as per approved Billing Break-up shall be released on pro-rata basis for the actual quantities of borosilicate glass, adhesives, membranes and primer supplied by the bidder limited to the lump sum price for the specified surface area after considering any subsequent changes. All the required quantities of the BOQ item indicated at Sl. no. 1 for completion of installation of borosilicate glass lining for the surface area as per specifications/revised specifications shall form part of the lump sum quoted price and no extra financial implication for any increase/decrease in BBU quantities shall be admissible for payment.
- E. In case of any increase/decrease in the quantities for the specified area, the bidder shall be responsible for its supply without any price implication within the indicated supply schedule.
- F. **The Manufacturer/supplier shall also provide ten (10) year of full replacement guarantee for the system, and bear the cost of replacement, supply, installation all complete, if the lining system deteriorates or fails to protect the chimney flue liner & duct transition piece.**
- G. **Supply of special T&Ps (as mentioned in clause 2.7.7) exclusively required for installation of Borosilicate Glass Block lining system shall also be in the scope of vendor.** Nominal adhesive/ membrane thickness shall be minimum 3 mm behind & between each block. A 1.5 mm thick layer should be troweled onto the MS liner as well as to the sides and back of each block before installation

Technical Conditions of Contract (TCC)

Chapter – II Scope of Work

	<p>H. <u>No extra payment shall be made for special T&Ps required for application of borosilicate glass block lining system over mild steel flue liners & duct transition piece.</u></p>
<p style="text-align: center;">2.2.2</p>	<p><u>Expert Supervision:</u></p> <p>A. Expert Supervision and technical support shall be provided by bidder during INSTALLATION of Borosilicate glass block lining system inside MS flue cans. The Bidder shall demonstrate the application methodology to the Purchaser and its erection agency with a view to ensure its installation as per the specifications and guaranteed parameters. The installation of Borosilicate Glass Lining Blocks, mixing of two components adhesive membrane by automatic mixing machine etc. shall be executed by erection agency of Purchaser under the expert supervision of Bidder/Seller.</p> <p>B. Any defect/non-conformity which may have potential impact on the guaranteed parameters shall be pointed out and cleared by the supervising experts after rectification by the erection agency. Once, the borosilicate glass block lining is installed under the supervision of the Experts deputed by the Bidder and protocol of completion of installation is jointly signed, Seller shall be under obligation of Guarantee in line with Clause 8.0 of the SCC and 2.2.1 (F) of TCC.</p> <p>C. Number of supervisors to be deployed and period of deployment should be as per site requirement duly agreed with BHEL.</p> <p>D. Representatives to co-operate with other agencies at site and coordinate in association with BHEL and customer's engineers at respective site.</p> <p>E. All travelling expenses / Visa fees / Medical fees to be borne by bidder.</p> <p>F. Representative to follow the Health, Safety and Environment (HSE) regulations in force at project site under the scope of bidder.</p> <p>G. Working Hours: To work under local site applicable requirements. No overtime payable. The Man days for payment purpose shall be calculated</p>

Technical Conditions of Contract (TCC)

Chapter – II Scope of Work

from the day when bidder reports at site for commencement of borosilicate execution work.

- H.** Medical: Vendor to arrange for medical insurance coverage for their representative.
- I.** Deployment Schedule: Deployment needs to be planned in phased manner depending upon the progress at BHEL Sipat site. Further review meetings shall be held at site to discuss work progress and deployment program.
- J.** Personnel deputed to site shall be an expert in their field / responsible for direct supervision / execution of field activities. They should be able to interact with their parent division at their HQ for trouble shooting operations / Engg. Clarifications etc.
- K.** Visits as indicated shall be required for deputation. Expert to complete assignment for each phase / visit as per BHEL's requirement. In case of site non-readiness / mutual agreement with construction manager / BHEL, the deputation programme shall be mutually discussed and agreed upon.
- L.** Vendor to indicate their check list with detailed activity network with recommended manpower along with general tool and plants needed for site readiness for deputation of their personnel.
- M.** Project Management meetings shall take place at BHEL Sipat site office before start of deputation and during course of execution (as per requirement). Responsible representatives from vendor shall attend these meetings on BHEL's call.
- N.** Protocols for applying / erection of Borosilicate shall be signed by vendor's representative at BHEL Sipat Site.
- O.** Vendor's representative at site shall be under the administrative control of construction manager of BHEL Sipat Site.
- P.** Vendor representative at site shall co-ordinate for their materials availability at site / report shortage / discrepancies of materials and associate himself for

Technical Conditions of Contract (TCC)

Chapter – II Scope of Work

	<p>coordination / compressing of application / erection of Borosilicate schedule.</p> <p>Q. All out efforts are to be made by both parties to complete site works within the most reasonable time / earliest possible.</p> <p>R. Payment shall be made for visit of vendor representative as per the time count start from reporting at site, leaving to site with the time sheet verification by construction manager of BHEL Sipat Site for actual number of man-days utilized and satisfactory completion of works at site.</p> <p>S. Payment shall be released by BHEL on monthly basis against invoices raised by vendor to Respective BHEL Site with certified time sheets. All payment will be in Indian Rupees (INR) / USD only.</p> <p>T. Supply of special tools requirements must be ensured by vendor.</p> <p>U. Under force majeure conditions applicable to BHEL engineers, vendor's experts are to be repatriated by vendor at his own cost.</p> <p>V. All misc. expenses required by vendor's representative at BHEL Sipat site are to be borne by vendor itself.</p> <p>W. Rates quoted / agreed shall remain firm till the completion of contract.</p> <p>X. Expected period of supervision for applying / erection of Borosilicate shall be as per BOQ.</p> <p>Note: The installation of Borosilicate Glass Lining Blocks, mixing of two components adhesive membrane by automatic mixing machine etc. all complete shall be executed by erection agency under the expert supervision of Borosilicate Glass Lining Blocks manufacturer / supplier.</p>
<p>2.3</p>	<p><u>WET STACK FLOW MODEL STUDY</u></p> <p>The intent of this enquiry/ specification is to carry out the Wet stack flow model study of NTPC Sipat FGD Project as per BOQ for complete duct system from absorber outlet to the top of the stack, design and optimization of gas flow and liquid collection system to mitigate stack liquid discharge (SLD) and shell corrosion,</p>

Technical Conditions of Contract (TCC)

Chapter – II Scope of Work

Preparation of final report and recommendations, preparation of drawings/ documents for execution of collection system, obtaining approval on documents from BHEL/ Customer/ customer's consultant, Preparation of BOQ, preparation of bought out item specification, procurement assistance for specialized items, site visit as specified later in the specification & as necessary for completeness in all respects and for efficient & trouble free operation of chimney and liquid collection system for project as per the Technical Specification for Wet Stack Flow Model Study.

The study shall comprise of the following as minimum:

- Condensation calculations & design of condensate collection system
- A scale physical flow model for liquid collector system (LCS) design.
- A computational flow model for plume downwash analysis.
- A physical or computational flow model for CEMS elevation flow performance.
- Design of optimum choke geometry, if required.
- Review & Approval of liquid collector system construction drawings.
- Site inspection & supervision for 7 days to verify and evaluate LCS system performance prior to commissioning.

The scope of study shall be from mist eliminator outlet to top of the stack. Vendor shall ensure the completeness in all respects and for efficient & trouble free operation of chimney and liquid collection system for project. Vendor shall also include site inspection & supervision for 7 days to verify and evaluate LCS system performance prior to commissioning by the agency carrying out the study.

The following codes and standard shall be followed for the conductance of this study:

- Revised wet stack design guidelines, 2012 by EPRI
- ACI 307 (American concrete institute code requirement for RC chimney)
- EPRI report CS-2520 Entrainment in wet stack 1982

Technical Conditions of Contract (TCC)

Chapter – II Scope of Work

	<ul style="list-style-type: none"> • EPRI report TR 107099 Wet stack design guide 1996 • EPRI report TR-109380 guidelines for fluid dynamic design of power plant ducts, 1998 • EPRI report GS-6984 FGD mist eliminator system design and specification guide • CICIND, ICAC, US EPA and other international and other latest codes and standards.
2.4	<p>The Customer / Consultant and "BHEL" may depute their representative for checking and supervision of important stages of work. The bidder shall be required to provide all facilities for inspection of works at no extra cost to BHEL. Any defect in quality of work or deviations from drawings / specifications pointed out during such inspection shall be made good by the bidder in the same way as if pointed out by the BHEL Engineer, without any cost implication to BHEL.</p>
2.5	<p>The work under this contract shall be carried out as per BOQ Cum Rate Schedule annexed as Price Bid. The description / specifications as per BOQ (Bill of Quantities) shall be read along with technical specifications. Quantities mentioned in the BOQ cum Rate schedule are approximate only and liable for variation due to change of scope of work / variation in schedule of quantities, changes in design etc.</p> <p>The rate quoted by the bidder for the individual item of BOQs shall remain firm irrespective of any variation in quantities. The tenderers shall undertake to execute actual quantities required for completion of works as per advice of BHEL Engineer and accordingly the final contract price shall be worked out on the basis of quantities actually executed and payments will also be regulated for the same. The quantities indicated against each item may vary to any extent and no compensation will be payable in variation of Individual quantity.</p>
2.6	<p>Any activity which is necessarily required for satisfactory execution of any item of BOQ in line with technical specifications shall be deemed to be included in BOQ item even if it is not described in the item description and no extra payment shall be made against such activity.</p>
2.7	<p>Bidder's scope also includes following:</p>

Technical Conditions of Contract (TCC)

Chapter – II Scope of Work

2.7.1	Bidder will work in close coordination with Customer / Consultant / BHEL Engineering Representative. The Customer / Consultant / BHEL Representative is authorized to sign and verify that supply has been performed in accordance with Customer / Consultant / BHEL design documents and drawings.
2.7.2	Bidder shall coordinate all Work with the erection contractor and Customer / Consultant / BHEL Work Force to ensure maximum efficiency and safety.
2.7.3	Bidder shall perform all interrelated collateral and incidental Work required, but not specifically covered elsewhere to produce the desired intention of this Contract. The intended final result of this project is a sealed chimney liner in which neither flue gas nor moisture can escape in the chimney annulus space.
2.7.4	Bidder shall supply daily project monitoring, inspection reports, other project documentation.
2.7.5	Drawings and additional information pertinent to the work are in the scope of bidder.
2.7.6	For Supervision Work: The schedule of execution of work for required supervision services shall be intimated by BHEL. Normal working shall be 06 days per week.
2.7.7	<p>Special T&Ps</p> <ol style="list-style-type: none"> 1. Mixing Machine: In order to ensure consistent, high quality mixing of the components of the lining system adhesive, (an) automated mixing machine(s) shall be provided with a min. 3,200 W mixer motor and fail-safe protection against the operator error of mixing the main adhesive component without its hardener. The mixing machine SHALL be CE – approved. The mixing machine MUST have thermal motor protection to minimize failure and fire risk. 2. Bidder shall provide all special equipment, tools and instruments required for handling and storage, and for test and maintenance of borosilicate lining system provided under this Contract. Any special tools/tackles, machinery required to maintain the controlled environment during installation of borosilicate glass block shall be in the scope of bidder. 3. The Supply of Mixing machine, special tools/tackles etc. shall also be completed along with Borosilicate Glass Block Lining materials in line with the Time schedule specified under Clause No 4.1 of TCC. Two-year Guarantee/

Technical Conditions of Contract (TCC)

Chapter – II Scope of Work

	<p>Warranty from the date of commissioning of mixing machine shall be bidder's responsibility. All spares (if any) required during the Guarantee/ Warranty period shall be in scope supply of bidder.</p>
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Technical Conditions of Contract (TCC)
Chapter – III Facilities at Site

3.0	Facilities at site
3.1	<ol style="list-style-type: none">1. Storage of Borosilicate Glass Block Lining System and Adhesives are in the scope of BHEL free of charge.2. BHEL will provide only work cabin/space within BHEL site office.

Technical Conditions of Contract (TCC)
Chapter – IV Time Schedule

4.0	TIME SCHEDULE																				
	<p>SUPPLY:</p> <p>Tentative Delivery Schedule for Sipat FGD Project shall be as follows.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">S.no</th> <th style="width: 40%;">Project Name</th> <th style="width: 15%;">No of Chimneys</th> <th style="width: 15%;">Tentative delivery Schedule</th> <th style="width: 20%;">Lining Installation Schedule</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>NTPC Sipat FGD Stage II</td> <td style="text-align: center;">2</td> <td></td> <td></td> </tr> <tr> <td>1.1</td> <td></td> <td>Chimney # 1</td> <td>Apr'23</td> <td>May'23</td> </tr> <tr> <td>1.2</td> <td></td> <td>Chimney # 2</td> <td>May'23</td> <td>Jun'23</td> </tr> </tbody> </table>	S.no	Project Name	No of Chimneys	Tentative delivery Schedule	Lining Installation Schedule	1	NTPC Sipat FGD Stage II	2			1.1		Chimney # 1	Apr'23	May'23	1.2		Chimney # 2	May'23	Jun'23
S.no	Project Name	No of Chimneys	Tentative delivery Schedule	Lining Installation Schedule																	
1	NTPC Sipat FGD Stage II	2																			
1.1		Chimney # 1	Apr'23	May'23																	
1.2		Chimney # 2	May'23	Jun'23																	
4.1	<p>The Borosilicate Glass Block lining material should be dispatched within 04 months from the date of issuance of Dispatch Clearance from the respective BHEL Unit/Region so as to reach the BHEL Sipat Site within 15 days from the date of dispatch. The date of LR/GR/RR shall be considered the date of dispatch of material. Date of receipt of material shall be considered for levying LD in line with the provisions of SCC clause no. 10.1.</p> <p>Note: The Bidder shall dispatch the Borosilicate Glass Block lining materials only after issuance of Material Dispatch Clearance Certificate (MDCC) by BHEL. MDCC shall be issued by BHEL within one month of submission of Material Test Certificate.</p>																				
4.2	<p>SUPERVISION:</p> <p>Expert Supervision for installation works of Borosilicate Glass Block Lining Schedule of supervision works shall be intimated by BHEL Construction Manager separately, in advance as per actual site requirement. Bidder/Seller shall arrange for deputation of supervisors within 2 weeks of BHEL intimation. Adequate number of supervisors shall be deployed by bidder at a time to meet the requirement for supervision of installation works of borosilicate glass block lining at Site.</p>																				
4.3	<p>The work under the scope of this contract is deemed to be completed in all respects, only when all the works are carried out as per satisfaction of BHEL. The decision of BHEL on completion date shall be final and binding on the contractor.</p>																				
4.4	<p>In order to meet above schedule in general, and any other intermediate targets set, to meet customer/ project schedule requirements, bidder shall arrange & augment all necessary resources from time to time on the instructions of BHEL without any extra cost to BHEL.</p>																				

Technical Conditions of Contract (TCC)
Chapter – V Terms of Payment

5.0	TERMS OF PAYMENT
5.1	PAYMENT TERMS: 1. For supply of Borosilicate Glass Block Lining: As per Clause 6.0 of SCC. 2. For Expert Supervision of Borosilicate Glass Block Lining system: As per Clause 6.0 of SCC. 3. For Wet Stack Flow Model study: As per Clause 6.0 of SCC.

Technical Conditions of Contract (TCC)
Chapter VI - General

6.1	EXECUTION OF WORK
6.1.1	The work shall be executed in a workman like manner and to the entire satisfaction of BHEL Engineer and as per technical specification issued with tender. In case of conflict, the decision of BHEL Engineer shall be final & binding.
6.2	DISCREPANCIES AND ADJUSTMENT OF ERRORS
6.2.1	In case of discrepancies between schedules of quantities, the specification and / or the drawings, the following order of preference shall be observed. (a) Amendments/Clarifications/Corrigenda/Errata etc. issued in respect of the tender documents by BHEL (b) Description in BOQ cum Rate Schedule. (c) Technical and Conditions of Contract. (d) Special Conditions of Contract. (e) General conditions of Contract.
6.2.2	If there are varying or conflicting provisions made in any one document forming part of the contract, the BHEL Engineer shall be final deciding authority with regard to the document.
6.3	PROGRESS REPORTING :
6.3.1	Manufacturer / authorized Supplier of OEM is required to draw mutually agreed monthly program in consultation with BHEL well in advance. Contractor shall ensure achievement of agreed program and shall also timely arrange additional resources considered necessary at no extra cost to BHEL.
6.3.2	The progress report shall indicate the progress achieved against planned, with reasons indicating delays, if any, and shall give the remedial actions which the MANUFACTURER / SUPPLIER of OEM intends to take to make good the slippage or lost time, so that further works again proceed as per the original program and the slippages do not accumulate and effect the overall program.
6.4	DRAWING AND DOCUMENTS
6.4.1	The detailed drawings, specifications available with BHEL engineers will form part of this tender specification. These documents will be made available to the contractor during execution of work at site. The contractor will also ensure availability of all drawings / documents at work place.

Technical Conditions of Contract (TCC)
Chapter VI - General

6.4.2	The data furnished in various annexures enclosed with this tender specification are only approximate and for guidance. However, the change in the design and in the quantity may occur as is usual in any such large scale of work.
6.4.3	Any error or ambiguity be discovered in the specification or information the supplier shall forthwith bring the same to the notice of BHEL before commencement of work. BHEL's interpretation in such cases shall be final and binding on the contractor.
6.4.4	Deviation from design dimensions should not exceed permissible limit. The supplier shall not correct or alter any dimension / details, without specific approval of BHEL.

Technical Conditions of Contract (TCC)
 CHAPTER VII - Technical specification for Borosilicate Glass Block Lining System

Clause No	Description
7.0	TECHNICAL REQUIREMENTS
7.1	Design parameters
7.1.1	Liner considerations The borosilicate glass block liner will have a thickness of 38 mm, for all its entire length. Proper provisioning should be made for borosilicate lining system for lining around gas sampling ports, expansion joints, man holes and other appurtenances.
7.2	Operating conditions
7.2.1	Operating conditions shall be as per Annexure-I and specification.
7.2.2	A margin of 15 deg centigrade above the operating conditions mentioned in Annexure-I shall be taken while selecting the appropriate material and thickness for design of the lining system.
7.3	Performance Requirements
7.3.1	Borosilicate glass block lining system will be designed in such a way that it will not require unscheduled outages for repair except for planned and scheduled routine maintenance and inspections.
7.3.2	Ten (10) year full replacement guarantee, including cost of supply, erection, enabling works, all labor, material, adhesive, primer, surface preparation, arrangement for application etc. all complete, and fulltime onsite QA supervision during erection & commissioning. During the guarantee period if the lining system fails to protect the chimney flue from deterioration, the borosilicate glass block lining manufacturer/supplier shall replace the partially affected portion or complete borosilicate lining system without any additional cost, including all labor, material, surface finish (SA 2 1/2), supply and application of primer, supply and application of two component adhesive membrane, supply and application of closed cell borosilicate glass blocks, arrangement for application on ground or erected flue cans etc all complete with onsite QA supervision of borosilicate glass block supplier.
7.3.3	The lining system shall be tested for its wet stack surface properties by an independent institute of sufficient knowledge and experience, subject to acceptance by the project owner, and furthermore the lining system supplier has a demonstrable track record of providing technical advice and support to customers for the design of environmentally effective liquid control systems in flue gas ducts and chimneys.

Technical Conditions of Contract (TCC)
 CHAPTER VII - Technical specification for Borosilicate Glass Block Lining System

7.3.4	The lining system (borosilicate glass block and adhesive) shall be offered by a supplier with demonstrated capabilities in the area of onsite technical support and QA/QC supervision, who employs QA/QC supervisors with a demonstrated experience in technical support and QA/QC supervision of the subject lining system.
7.3.5	The supplied lining system (borosilicate glass block and adhesive) shall be capable of withstanding fire risk for a minimum period of 2 hours as per ASTM E-119. Proper certification from an independent institute of sufficient knowledge and experience shall be submitted by supplier subject to acceptance by the project owner, showing the capability of the lining system (borosilicate glass block and adhesive) to protect the steel chimney flues & transition duct piece from structural damage by fire of said rating.
7.3.6	Supplier shall produce certificates from an independent institute of sufficient knowledge and experience, subject to acceptance by the project owner, showing that the workers can do the work on supplied lining system safely, without any adverse health effects and without requiring excessive protective measures.
7.4	Design Requirements
7.4.1	General
7.4.1.1	Design of the borosilicate lining system must be performed by a professional engineer in the design of such system for chimney flues.
7.4.1.2	Specified requirements of this specification are to be regarded as minimum requirements. If the Fabricator's design and/or experience dictate these minimum requirements should be exceeded, the design, supply and application shall be performed accordingly, without any extra cost implication.
7.5	Materials Requirements
7.5	The steel chimney flues & transition duct, made of mild steel, shall be internally protected with a lining system consisting of 38 mm thk closed cell borosilicate glass blocks, applied with a flexible, chemically resistant adhesive, using a lining system that meets all of the following requirements:
7.5.1	The lining system shall use closed cell borosilicate glass blocks with the following physical properties:
7.5.1.1	Minimum density of $0.19 \times 10^3 \text{ kg/m}^3$ (+/- 20 %)
7.5.1.2	coefficient of linear thermal expansion not greater than $5.5 \times 10^{-6} / ^\circ\text{C}$
7.5.1.3	Minimum compressive strength of 1.00 Mpa as per ASTM C 165

Technical Conditions of Contract (TCC)
CHAPTER VII - Technical specification for Borosilicate Glass Block Lining System

7.5.1.4	Minimum flexural strength of 0.62 Mpa as per ASTM C.203/C.240
7.5.1.5	The blocks shall be resistant to thermal cyclic loading under FGD bypass/ hot gas service conditions, and sudden temperature changes, including high temperature spikes.
7.5.2	The borosilicate glass block system shall use a flexible, chemically resistant adhesive, with all required surface preparation, primer, labor, equipment etc., all complete. The adhesive membrane shall be a 2-component having excellent elastomeric properties and be acid & heat resistant. The adhesive membrane shall be applied in between and behind the blocks in a 3 mm thick layer ensuring a proper bond and adhesion. A 1.5 mm thick layer should be trowelled onto the liner as well as to the sides and back of each block before installation. Double buttering technique shall be used to ensure full bond of each block to the liner and to each other. Contractor shall get installation procedure approved by BHEL/NTPC before installation including verification of installation procedure & workmanship standards of the lining system. The adhesive membrane shall have the following properties.
7.5.2.1	Tensile strength at 23 °C greater than or equal to 1.0 N/mm ² as per ASTM D.412
7.5.2.2	Resistant to corrosive flue gas environments.
7.5.2.3	Remain elastomeric and flexible under hot gas conditions and sudden temperature changes.
7.5.2.4	The adhesive shall be suitable for trowel application.
7.5.3	The steel surface shall be blast cleaned to a cleanliness of SA 2 ½ and approved by the supplier of the lining system. The substrate shall thereafter be primed using a high performance epoxy primer within a short time window approved by the supplier. The lining system manufacturer shall demonstrate a proven Quality Control system that monitors and documents the key physical properties, as described above.
7.6	STANDARDS AND CODES
7.6.1	The borosilicate lining system to be provided under this Specification, including all appurtenances and accessories, and shall be designed, fabricated, inspected, tested, stamped and preserved to the extent indicated in said referenced Standards and Codes. Where this Specification does not include such reference, the system, or any of its components, shall be designed, fabricated, inspected, tested and preserved, as applicable, to comply with currently recognized International and/or manufacturer's specification, whichever is stringent and more restrictive.

Technical Conditions of Contract (TCC)
 CHAPTER VII - Technical specification for Borosilicate Glass Block Lining System

7.6.2	In all cases Bidder shall adhere to and comply with the requirements of Indian standards, which are found to be more restrictive than those specified herein.
7.7	QUALITY ASSURANCE AND QUALITY CONTROL
7.7.1	The Bidder shall submit upon request a copy of Its Quality Assurance Manual including Quality Procedures.
7.7.2	The Bidder shall conduct an inspection and testing program which shall record and verify the essential properties of the constituent materials and the finished liner.
7.7.3	The Bidder shall conduct test to verify the mechanical properties of borosilicate bricks and adhesive/mortar and the tests shall be documented during the course of design and fabrication, and shall be made available to owner.
7.7.4	Unless otherwise specified the bidder's standard tests shall be performed on all batches of materials furnished. The owner may or may not elect to witness tests, but the bidder shall notify the Owner's Quality Assurance Department no later than 10 days in advance of all scheduled tests.
7.8	SAFETY, NOISE AND ENVIRONMENT REQUIREMENTS
	SAFETY
7.8.1	The equipment supplied under this Specification shall meet the U.S. "OCCUPATION, SAFETY, AND HAZARD ADMINISTRATION" (OSHA) requirements or equivalent.
7.8.1.1	Jobsite Safety and Scrap Disposal
7.8.1.1.1	Safety programs and procedures shall be within the scope of this Specification, it should be noted that the all materials that are potentially flammable materials and must be handled in keeping with good industry practice and in compliance with the manufacturer's recommendations. Successful bidder should issue necessary instruction to the installation bidder during the application.
7.8.1.1.2	Successful vendor shall provide to the installation vendor/BHEL the disposal procedure of scrap and waste materials in line with International/Indian applicable rules and regulations
	Safety and protection of work and property
7.8.1.2	The Bidder shall provide for the procedures for safety and protection of the work and of materials and equipment to be incorporated therein, whether in storage on or off the site. Provide protection guild line at all times against rain, wind, storms, condensation, or heat so as to maintain all work and equipment and materials free from injury of damage. Bidder in coordination with the installation

Technical Conditions of Contract (TCC)
 CHAPTER VII - Technical specification for Borosilicate Glass Block Lining System

	agency should ensure that at the end of each day, all new work likely to be damaged shall be appropriately protected.
7.8.2	Environmental Data
7.8.2.1	Should the lining system to be furnished by the Bidder have discharge points to the environment and/or generate waste materials that must be discharged to the environment, the Bidder shall provide, upon Purchaser's request, a plan for the treatment of the discharge/waste to meet current regulations of the Indian government/ regulatory authorities.
7.8.2.2	The Bidder shall submit, within thirty (30) days of demand, additional information on noise and/or other environmental data. All information shall be prepared in a manner acceptable Indian government/ regulatory authorities.
7.9	HANDLING, STORAGE AND PROTECTION
7.9.1	Bidder shall furnish guidelines and supervision to BHEL/Installation vendor during handling storage.
	JOB SITE INSPECTION AND PREPARATION
7.10	In coordination with the borosilicate installation agency, successful bidder should submit a plan detailing the application sequence and methods to be employed, including moving, handling, storage, erection, fit up and the methods to be used for environmental protection.

Technical Conditions of Contract (TCC)
Chapter-VIII: Technical specification for Wet Stack Flow Model Study

Clause no	Description
8.1	INTENT OF SPECIFICATION
	The intent of this enquiry/ specification is to carry out the Wet stack flow model study of 2 x 500 MW NTPC SIPAT STAGE-II (FGD PACKAGE) project for complete duct system from absorber outlet to the top of the stack, design and optimization of gas flow and liquid collection system to mitigate stack liquid discharge (SLD) and shell corrosion, Preparation of final report and recommendations, preparation of drawings/ documents for execution of collection system, obtaining approval on documents from BHEL/ Customer/ customer's consultant, Preparation of BOQ, preparation of bought out item specification, procurement assistance for specialized items, site visit as specified later in the specification & as necessary for completeness in all respects and for efficient & trouble free operation of chimney and liquid collection system for project.
8.2	SCOPE OF WORK
8.2.1	Wet stack model study shall consist of the following:
8.2.1.1	Condensation calculations & design of optimized condensate collection system
8.2.1.2	A scale physical flow model for liquid collector system (LCS) design.
8.2.1.3	A computational flow model for plume downwash analysis.
8.2.1.4	A physical or computational flow model for CEMS elevation flow performance.
8.2.1.5	Design of optimum choke geometry, if required.
8.2.1.6	Review & Approval of liquid collector system construction drawings.
8.2.1.7	Site inspection & supervision for 7 days to verify and evaluate LCS system performance prior to commissioning.
8.2.2	Wet stack study shall be performed with a wet stack installation where there does not exist an identical or mirror image installation. The objective of the wet stack study shall be to maximize liquid collection downstream of the mist eliminators and to preclude ground level rainout from the stack by recommending experimentally developed, tested, and optimized liquid

Technical Conditions of Contract (TCC)
Chapter-VIII: Technical specification for Wet Stack Flow Model Study

	<p>collection devices and drainage systems to return collected liquid to the absorber with minimum re-entrainment.</p> <p>Bidder to furnish the recommendation for LCS with most optimized design (i.e. recommended number, location, type etc. of gutters, collectors and other components). BHEL reserves the right to accept the design or suggest further changes in the design based on techno-economic analysis. Bidder shall implement the changes suggested by BHEL without any commercial implication and final design shall be subjected to BHEL's approval during contract stage, in the event of order.</p>
8.2.3	The following codes and standard shall be followed for the conductance of this study
8.2.3.1	Revised wet stack design guidelines, 2012 by EPRI
8.2.3.2	ACI 307 (American concrete institute code requirement for RC chimney
8.2.3.3	EPRI report CS-2520 Entrainment in wet stack 1982
8.2.3.4	EPRI report TR 107099 Wet stack design guide 1996
8.2.3.5	EPRI report TR-109380 guidelines for fluid dynamic design of power plant ducts, 1998
8.2.3.6	EPRI report GS-6984 FGD mist eliminator system design and specification guide
8.2.3.7	CICIND, ICAC, US EPA and other international and other latest codes and standards.
8.2.4	The study shall be carried out by design methods and tools:
8.2.4.1	Preliminary design review based on experience
8.2.4.2	Laboratory flow modelling -3-D
8.2.4.3	Computer flow modelling -3-D
8.2.4.4	Computer program calculations – 2-D
8.2.5	Preliminary design review based on experience
	Based on the inputs furnished as per enclosed Annexure with this specification for the duct work and stack, preliminary design review need to be carried out to estimate the liquid collection requirements, predict the condensation rate in the duct & stack and perform the preliminary system design.

Technical Conditions of Contract (TCC)
Chapter-VIII: Technical specification for Wet Stack Flow Model Study

8.2.6	Condensation calculations using analytical / numerical tools
8.2.6.1	Gas flow study should include the calculation for the condensate formed and / or condensate carry over. The condensate flow study should include condensate quantity formed due to:
8.2.6.1.1	Thermal condensation on the liners
8.2.6.1.2	Adiabatic condensation
8.2.6.1.3	Turbulence of flue gas flow near entry of the stack
8.2.6.1.4	At the outlet duct from absorber mist eliminator outlet
8.2.6.1.5	Contribution from mist eliminator carryover in case of normal wash cycle or mist eliminator become fouled with time.
8.2.6.2	Detailed calculations along with the design basis for condensation rate in the duct from absorber outlet to the top of the chimney for the worst operating case, minimum boiler load and design conditions shall be furnished as a function of ambient air temperature, wind velocity and liner design variables in the report with an accuracy of $\pm 10\%$.
8.2.7	Design of Condensate collection & drainage system
8.2.7.1	Size of gutter(s) along with inner surface of Chimney flue can and inlet duct from absorber outlet to inlet of chimney flue can, such that condensate is collected efficiently and drained off with a drainage system till its terminal point at ground outside the duct & Chimney shell.
8.2.7.2	As the gutter shall be made of Titanium/C-276 as compatible with inner surface, suitable shape, size and thickness is to be recommended so that gas flow occurs efficiently.
8.2.7.3	The size, thickness, location and material of condensate drainage pipe shall be included in recommendation. It is envisaged that pipe from gutter to outside of Chimney liner shall be of Titanium/C-276 and thereafter the drainage pipe shall be of FRP up to the collection pit. Routing of the drain pipes shall be provided.
8.2.7.4	After the flow-model study is performed, accordingly design of liquid-collection devices for the full scale Wet Stack is to be carried out and detailed drawings, design basis and calculations shall be submitted.
8.2.8	Computational 3-D fluid-dynamic-model study (CFD Analysis)
8.2.8.1	Performance of a computational 3-D fluid-dynamic-model study of the minimum upper one third of the stack liner and shell to evaluate downwash

	<p>of the wet plume. CFD model shall include the surrounding structure which are significant to wind/ plume flow patterns preferably minishell, external handrails and floor at the stack outlet.</p> <p>A computational model of the stack shell and liner(s) shall be constructed for the plume downwash study. The plume downwash study shall include analysis of the local wind/temperature data to identify the occurrence of critical wind and temperature conditions. The plume downwash study shall identify the stack velocity and ambient wind conditions that produce downwash and the maximum extent of expected downwash throughout the year for shell corrosion protection. For sites where ambient temperatures reach freezing, a "winter" period shall be simulated to evaluate icing potential on the stack.</p> <p>Depending on the results of the downwash study, there may be a need to develop an optimum choke geometry, if required, to minimize the plume downwash & liquid impingement of the shell. This includes evaluation of liquid collectors and drains to prevent re-entrainment and discharge of large droplets from the top of the choke.</p> <p>Bidder to use the latest software for the CFD modelling and shall submit the model along with results in form of contours and vector plots of velocity, pressure, concentration and temperature at various test locations and summarized in tabular format. The model shall be tested with various simulated operating, minimum and design flow conditions, maximum wind speed, wind orientations, to evaluate the potential of the downwash.</p> <p>The Bidder shall review Minishell details (Liner extension above roof) enclosed as an Annexure and confirm the liner-extension design with their recommendation.</p> <p>In case of the excessive downwash or reversed flow at stack exit or liquid exiting the stack liner and forming on the top of the concrete shell, bidder to provide the corrective actions, design modifications and evaluate the modified geometry.</p>
8.2.9	Physical model of the system

Technical Conditions of Contract (TCC)
Chapter-VIII: Technical specification for Wet Stack Flow Model Study

8.2.9.1	An experimental gas-flow-model study to design and develop collectors for the duct and stack downstream of the mist eliminator that will collect and drain liquid from the walls to prevent re-entrainment.
8.2.9.2	Laboratory Physical model study shall include the following details for wet stack design
8.2.9.2.1	Estimation of the total liquid load on the liner surface as a result of thermal and adiabatic condensation. This estimate shall be based on the liner and shell geometry, thickness, materials of construction and the flue gas-flow rate and properties over a range of expected plant-operating conditions and worst-case ambient weather conditions considering the mist eliminator fouling / wash cycles.
8.2.9.2.2	Design and optimization of liquid collectors in the absorber-outlet hood, absorber outlet ducts, stack-liner entrance region and stack liner outlet to prevent stack liquid discharge (SLD) . The collectors will collect liquid from surfaces, re-entrainment, and guide the liquid to locations where it can be drained out of the system. This development work shall be conducted on a scale model of the wet duct and stack system, from the outlet of each absorber's mist eliminator include the absorber outlet and ducting, the stack breaching duct and a minimum of three (3) diameters of the stack liner above the top of the stack breaching duct. Model scales shall be minimum 1:12 and to be selected to ensure accurate modelling results for all tested parameters. The same shall be finalized after the award of the contract. The design should be of integrated complete system of liquid collectors from absorber outlet to chimney top for each unit.
8.2.9.2.3	The laboratory test includes details of liquid re-entrainment and drainage behaviour over the expected range of unit operating conditions and confirm the stack-liner design velocity.
8.2.9.2.4	Physical model shall include any internal devices larger than 3 inches in diameter/protrusion that may affect the flow, such as structural members, internal dampers, flow controls, and expansion joints. The model shall be mainly constructed from transparent acrylic or plastic, sheet metal, or coated rigid tubing such that it is suitable for wet testing. Modeled flow control and liquid collection devices may be constructed with sheet metal, or other suitable construction materials, so long as the scaled liquid flow performance is not adversely modified.

Technical Conditions of Contract (TCC)
Chapter-VIII: Technical specification for Wet Stack Flow Model Study

8.2.9.2.5	The physical model shall be tested for pressure and velocity profiles at selected cross sections through the ducts and liner. A velocity traverse shall be conducted within the modeled liner to ensure that the cyclonic flow levels are within the U.S. EPA Method 1 recommended limitations for CEMS operation. In the event testing indicates that cyclonic flow could be a concern at the continuous emissions monitoring system (CEMS) elevation, a simulation, either by extension to the physical model or using a computational fluid dynamic model, shall be performed to evaluate this flow at the CEMS level. If needed, corrective devices shall be designed and tested to reduce stack swirl at the CEMS elevation.
8.2.9.2.5	The physical model shall be tested by introducing liquid in a size and quantity such that the model shall approximately match the two-phase flow modelling requirements for droplet trajectory and loading. This testing shall be used to locate and design the liquid collection devices and drains.
8.2.9.2.6	Evaluation of re-entrainment at liner-expansion joints in the laboratory test rig and development of a unit-specific liquid-collector geometry to collect and drain the liquid from the liner-expansion joints.
8.2.9.2.7	Using this model effective internal liquid collection devices shall be developed and optimized to improve the droplet deposition and liquid collection in the stack as well as to prevent the re-entrainment of droplets from liquid pools and films.
8.2.9.2.8	Bidder shall submit the detailed standard procedure for carrying out the physical model study at vendor lab for customer information / approval before the conductance of physical model study at lab.
8.2.9.3	Site inspection & supervision
8.2.9.3.1	Bidder to perform an onsite inspection as per the EPRI Revised Wet Stack Design Guideline, 2012. Site visit should occur for 7 days time during the construction phase, when liquid collection system is nearing completion, to inspect the liquid collection system as installed to ensure that the designed flow controls, liquid collectors, drains, and drain protection are installed properly and shall perform as intended. Bidder to provide the site inspection report to validate the design and installation.
8.2.9.3.2	The onsite inspection should confirm that the liquid-collection system has been fabricated and installed correctly and to identify any deviations to the recommended design as a result of field modifications made to ease

Technical Conditions of Contract (TCC)
Chapter-VIII: Technical specification for Wet Stack Flow Model Study

	installation. The bidder shall also ensure the liquid collection system is installed properly.
8.2.10	The key deliverables from this study are
8.2.10.1	Bidder to furnish the total quantity of condensate formed from absorber mist eliminator outlet to top of the stack.
8.2.10.2	Bidder to furnish the number, sizing and location of required various liquid collectors/ gutters, their shape, design of its evacuation piping from inside the chimney to outside and their Influence on the flow in the chimney liner.
8.2.10.3	Flow model study shall minimize system pressure losses and optimize collection and drainage and provide expected field wet stack system pressure loss across expected load range.
8.2.10.4	Bidder to achieve minimum stack liquid discharge. In case of excessive stack liquid discharge, possible means of modification to duct and stack geometry need to be proposed by bidder for improvement.
8.2.10.5	Bidder to ensure the design of effective liquid collection system for various plant load operating conditions and absorber combinations.
8.2.10.6	Bidder to furnish the comparison of the experimental and computer modelling.
8.2.10.7	Bidder to recommend modifications to prevent the chimney liquid discharge issues and to make the geometry more favorable for liquid collection.
8.2.10.8	Bidder to furnish the fabrication/installation drawings after the completion of model study for fabrication.
8.2.10.9	Bidder to identify appropriate liner system and gas inlet geometries (including flow control devices) to ensure homogeneous gas flow conditions and achieve cyclonic free flow distribution at the CEMS location.
8.2.10.10	Bidder to provide recommendations and design for sealing drain piping/ seal pots to inhibit backflow.
8.2.10.11	Bidder to recommend drain protection devices to minimize pluggage occurrences an flow and recommend method for monitoring liquid collection drainage flow in case of liquid collection system pluggage and SLD problems.
8.2.10.12	Bidder to provide stack outlet modifications, such as liner extensions or chokes, to minimize stack icing occurrences and to provide Stack shell coating requirements to protect concrete shells from corrosion due to plume downwash.

Technical Conditions of Contract (TCC)
Chapter-VIII: Technical specification for Wet Stack Flow Model Study

8.2.10.13	Bidder to evaluate the plume downwash and recommend modifications to minimize downwash using CFD model preferably at reduced unit load operation and high wind speed conditions.
8.2.10.14	Bidder to provide the drawings/documents for the necessary provisions in Chimney during the course of this study, if applicable, to carry out the performance test for wet stack at site in future.
8.2.11	Customer Specific Technical Requirements
8.2.11.1	GENERAL
8.2.11.1.1	Bidder to furnish the detailed Master drawing list for wet stack flow model study for BHEL and customer approval.
8.2.11.1.2	Bidder to provide technical advice/ recommendations/ assistance & solutions regarding site related construction problems related to condensate collection and drainage system in the duct and chimney as and when required including site visits, participation in meetings through VC/WEB with BHEL/ customer/ customer's consultant.
8.2.11.1.3	The physical model study may be witnessed by BHEL / Plant Owner for approximately 3 days. Intimation for the witnessing shall be provided by the bidder 4 weeks prior to conductance of physical model test at vendor lab. Video streaming facility shall also be provided for witnessing the physical model test from India. In addition, complete physical model test including the flow patterns and droplets trajectory shall be recorded on video CD which shall be provided after the physical model study.
8.2.11.1.4	The physical model shall be stored at the vendor lab at no cost for a period of 1 year after the submission of final report and completion of the study. Thereafter its further disposal or storage shall be decided after the award of the contract on the cost basis. Optional prices may be quoted for the same and this shall not be considered for the evaluation of bid.
8.2.11.1.5	The bidder is advised to take care all information that may be necessary for preparing the bid and entering into the contract. Claims of any kind due to variation or ignorance of site conditions and environmental conditions after award of works will not be entertained.
8.2.11.1.6	All revisions/changes required as per BHEL/ Project owners, comments/ requirements, site requirement etc. shall be carried out by the bidder.
8.2.11.1.7	Three hard copies of approved reports/documents/drawings shall be submitted by the bidder. Electronic copies of the CFD model, analysis and

Technical Conditions of Contract (TCC)
Chapter-VIII: Technical specification for Wet Stack Flow Model Study

	report shall be submitted in primary original format as well as in printable non-proprietary formats (e.g. .pdf).
8.2.11.1.8	Change in recommendation / design after the analysis shall be taken care by bidder without any commercial implication in this contract value.
8.2.11.1.9	Bidder shall furnish detailed activity schedule, report generation schedule and list of inputs required for successful execution of Wet stack flow model study.
8.2.11.1.10	The Purchaser/ Customer however also reserve the rights to check the detailed calculations in the event of order and their interpretation shall be final in the event of any conflict.
8.2.11.1.11	Bidder shall furnish all the documents in English and SI units shall also be followed in the calculations and reports wherever used.
8.3.0	SUGGESTIVE DRAWINGS/ DOCUMENTS SUBMISSION
8.3.1	Following Basic drawings/documents to be submitted within 2 weeks from LOI date.
8.3.1.1	MASTER DRAWING /DOCUMENT LIST (to be finalized after order)
8.3.1.2	WET STACK STUDY SCHEDULE, PLANNING AND MILESTONES
8.3.1.3	LIST OF CODES AND STANDARDS TO BE FOLLOWED.
8.3.1.4	DETAILED STANDARD PROCEDURE FOR PHYSICAL MODEL & CFD STUDY, DRAWINGS & DOCUMENTS SUBMISSION.
8.3.1.5	DESIGN DRAWINGS OF CONDENSATE COLLECTION AND DRAINAGE SYSTEM
8.3.1.6	THERMAL AND ADIABATIC CONDENSATION CALCULATIONS WITH DESIGN BASIS
8.3.2	Following Basic drawings/documents to be submitted and duly approved within 12 weeks from LOI date. This is not an exhaustive list of drawings/documents for WET STACK STUDY. Bidder shall furnish all applicable drawings /documents other than as mentioned below which is/are required for successful execution of condensate collection and drainage system after the absorber outlet to stack outlet.
8.3.2.1	TECHNICAL DATASHEETS
8.3.2.2	BILL OF QUANTITIES
8.3.2.3	WET STACK STUDY REPORT WITH RECOMMENDATIONS
8.3.2.4	CFD MODEL, ANALYSIS AND RESULTS

Technical Conditions of Contract (TCC)
Chapter-VIII: Technical specification for Wet Stack Flow Model Study

8.3.3	Subsequent revisions of above drgs/docs to be submitted within 7 days of comments received from BHEL/ CUSTOMER.
8.3.4	Drawings submitted shall be complete in all respects with revised drawing submitted incorporating all comments. Any incomplete drawing submitted shall be treated as non-submission with delays to bidder's account.
8.4	OTHER TERMS OF CONTRACT
	The reports / design and drawings prepared by the bidder may be required to be revised / modified due to various reasons including site condition, engineering inputs, layout changes and CUSTOMER's requirement. The quoted rate shall be inclusive of additional effort to take care of such revisions.
8.5	DOCUMENTS TO BE SUBMITTED ALONG WITH BID
8.5.1	Detailed procedure adopted for the conductance of the study.
8.5.2	Wet stack study planning and scheduling.
8.5.3	Computer program to be used for the 3D modelling and analysis.
8.5.4	Mathematical tools & codes / programs used for the analytical calculations.
8.5.5	Technical deviation schedule (if reqd.) (enclosed herein)

ANNEXURES:

Annexure-A:

“SPECIFICATION NO **PE-TS-999-620-C002**, Section D, Sub-section D26” (TECHNICAL SPECIFICATION FOR BOROSILICATE GLASS BLOCK LINING SYSTEM), Document no. **PE-DC-491-100-N318** (CHIMNEY FLUE ID CALCULATION) for Sipat FGD as Annexure 1 and SPECIFICATION NO **PE-TS-491-142-N102**, Volume 1” (TECHNICAL SPECIFICATION FOR WET STACK FLOW MODEL STUDY).

Annexure-B:

BOQ cum Rate Schedule for the Work of “Design, Supply and Expert Supervision for installation works of Borosilicate Glass Block Lining for chimney flue can & duct transition piece including Wet Stack Flow Model Study at 2x500 MW NTPC Sipat Stage II FGD Project.”

SPECIAL CONDITIONS OF CONTRACT (SCC)

“Design, Supply and Expert Supervision for installation works of Borosilicate Glass Block Lining for chimney flue can & duct transition piece including Wet Stack Flow Model Study at 2x500 MW NTPC Sipat Stage II FGD Project”

BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR WESTERN REGION



SPECIAL CONDITIONS OF CONTRACT (SCC)

S. No.	Description
Volume-IA	Part-I: Contract specific details
1.	Definitions of Terms
2.	Abbreviations
3.	Price
4.	Evaluation Criteria
5.	Variation of Contract Value
6.	Terms of Payment Against Supply and Documents to be submitted by Vendor for Payment
7.	Performance Bank Guarantee
8.	Guarantee Period
9.	Inspection
10.	Delivery Failure and Termination / Liquidated Damages
11.	Tenderer to Inform Himself fully
12.	Ordering by BHEL
13.	Transit Insurance
14.	Circulars
15.	Void
16.	Void
17.	Rights of BHEL
18.	Patent Right
19.	Cartel Formation
20.	General Terms

SPECIAL CONDITIONS OF CONTRACT (SCC)

1.0	<p>DEFINITION OF TERMS:</p> <p>Throughout the Tender Documents including the Enquiry Letter, the following words shall have the meanings assigned to them herein, unless the subject matter or the context requires otherwise.</p>
1.1	<p>Purchaser shall mean M/s Bharat Heavy Electricals Limited (A Govt. of India Undertaking) incorporated under the Companies Act 1956 acting through its Power Sector Western Region (PSWR) which expression shall include its successors and assigns. It may also be referred to as BHEL.</p>
1.2	<p>Owner shall mean the Customer or Client for whose project the enquiry is issued by Purchaser and shall include its successors and assigns as well as authorized officer(s)/ representative(s).</p>
1.3	<p>Consultant shall mean the agency appointed by Owner or Purchaser to provide consultancy services for the project and shall include its successors and assigns as well as authorized officer(s)/ representative(s).</p>
1.4	<p>Tenderer shall mean the Firm/ Company/ Organization which quotes against the Tender Enquiry issued by Purchaser. It may also be referred as Bidder or Vendor.</p>
1.5	<p>Order/ Contract shall mean and include the general conditions, bidding conditions, specific conditions, specifications, schedules, drawings, form of tender, covering letters, schedule of prices and quantities, letter of intent/ award of the Purchaser, Integrity Pact (if applicable), special conditions applicable to the project and subsequent amendments mutually agreed upon. It may also be referred as Purchase Order.</p>
1.6	<p>Seller/ Contractor shall mean the Firm/ Company/ Organization with whom the Order/ Contract is made and shall be deemed to include its successors, Representatives, heirs, executors, administrators and permitted assigns, as the case may be. It may also be referred as Supplier.</p>
1.7	<p>Sub-Contractor shall mean the person/ firm/ company/ organization to whom any part of the work has been sub-contracted by Seller/ Contractor, with the written consent of Purchaser, and shall include sub-contractor's heirs, executors, administrators, representatives and assigns.</p>
1.8	<p>Engineer shall mean the authorized officer of Purchaser to act as the engineer on its behalf for the purpose of the Order/ Contract.</p>
1.9	<p>Site shall mean and include the land and place on which the power station and related facilities are to be constructed and any adjacent land which may be</p>

SPECIAL CONDITIONS OF CONTRACT (SCC)

	allocated or used by Owner or Seller/ Contractor in performance of the Order/ Contract.
1.10	Tests on completion shall mean such tests as prescribed in specifications and/ or tests mutually agreed upon by Purchaser and Seller/ Contractor, to be performed by Seller/ Contractor after erection of equipment to establish its satisfactory operation as per specifications.
1.11	Commissioning shall mean successful completion of Trial Operation and readiness of the contracted/ ordered plant and materials for commercial use. This will include all consumables and inputs required for pre-commissioning.
1.12	Initial Operation or Trial Operation or Reliability Run shall mean continuous integrated operation of the contracted/ ordered plant and materials under varying loads as proof of satisfactory operation for a specified period.
1.13	Inspection Agency (IA) shall mean person(s) authorized by Purchaser / Owner to inspect the stores as per Order/ Contract at Contractor's/ Sub-Contractor's works. Vendors to raise inspection call on BHEL – CQS website.
1.14	Month shall mean calendar month and week shall mean 7 days.
1.15	Consignee shall mean the official(s)/ person(s) to whom the stores are required to be delivered in the manner indicated in the Order/ Contract.
1.16	Plant/ Equipment/ Stores shall mean the goods, machinery, components, parts, spares etc. required to be supplied by Seller/ Contractor as per Order/ Contract.
1.17	Contract Engineer (CE) shall mean the official who signs the Order/ Contract on behalf of Purchaser.
1.18	Site Engineer shall mean officer of Purchaser/ Owner authorized to receive and verify the in-coming stores, and issue Material Receipt Certificate (MRC)/ Stores Receipt Voucher (SRV).
1.19	Site Inspection Agency (Site IA) shall mean person(s) authorized by Purchaser/ Owner to inspect the stores/ works included in Order/ Contract at the Project Site.
1.20	GENERAL The words incorporating singular shall include plural and vice-versa, the words incorporating masculine gender shall include feminine gender and vice-versa, and the words incorporating persons shall include bodies, corporate, limited liability companies, partnership and other legal entities.

SPECIAL CONDITIONS OF CONTRACT (SCC)

2.0 ABBREVIATIONS:

AWB	Airway Bill
BL	Bill of Lading
BOQ	Bill of Quantity
CIF	Cost, Insurance and Freight
CQ	Corporate Quality
CVD	Countervailing Duty
DMS	Document Management System
EMD	Earnest Money Deposit
E&C	Erection and Commissioning
FOR	Freight on Road
GR	Goods Receipt
H1	Bidder quoting highest landed cost to BHEL
IP	Integrity Pact
IEM	Independent External Monitor
L1	Bidder quoting lowest landed cost to BHEL
LC	Letter of Credit
LOI	Letter of Intent
LOA	Letter of Award
LR	Lorry Receipt
MDCC	Material Dispatch Clearance Certificate
MRC	Material Receipt Certificate
MSMED	Micro Small and Medium Enterprises Development
NIT	Notice Inviting Tender
O&M	Operation & Maintenance
PBG	Performance Bank Guarantee
P&ID	Process & Instrumentation Diagram
PO	Purchase Order
PQR	Pre-Qualification Requirement
FGD	Flue Gas Desulfurization

SPECIAL CONDITIONS OF CONTRACT (SCC)

QS	Quality Surveillance
RA	Reverse Auction
RBI	Reserve Bank of India
RFQ	Request for Quotation
RR	Railway Receipt
SCC	Special Conditions of Contract
TCC	Technical Condition of Contract
USD	United States Dollar
INR	Indian National Rupee
LD	Liquidated damages
SBI	State Bank of India
PSWR	Power Sector Western Region, Nagpur

SPECIAL CONDITIONS OF CONTRACT (SCC)

3.0	Price				
3.1	Bids of all Bidders shall be in Indian Rupee only on FOR destination site basis (Bidders shall quote the rate excluding GST & GST cess)				
3.2	Void				
4.0	Evaluation Criteria:				
4.1	Tenders will be evaluated on the basis of delivered cost, i.e. total cost to the BHEL, taking into consideration loadings, if any, and all available financial advantages, including those available from Owner, taxation authorities etc. (i.e. Credit of GST)				
5.0	Variation of Contract Value:				
5.1	Rates shall remain Firm for any increase or decrease in the Order/ Contract value up to plus or minus 30% (for any amendment) within three years from the date of original PO unless specified otherwise in NIT.				
5.2	This tender is a Firm price contract. There is no Price Variation Clause during the currency of the contract.				
6.0	TERMS OF PAYMENT:				
6.1	<p>TERMS OF PAYMENT AGAINST SUPPLY:</p> <p>(i) 100 % of Basic Price (Excluding GST) of material supplied as per BOQ item No. 1 of Rate Schedule shall be paid within Payment time line furnished below from the date of receipt and acceptance of material at site submission of following documents:</p> <ol style="list-style-type: none"> a. Original tax invoice with three copies. b. Original LR/RR. c. Material Receipt Certificate (MRC) issued by Site official in one original and two copies. d. Packing List in one original and two copies. e. Copy of material dispatch certificate (MDCC) issued by BHEL/Customer. f. Quality certificate in one original and two copies. g. Copy of valid performance Bank Guarantee as specified under clause no. 7.0 of SCC. <p>❖ Payment shall be released as per Time line furnished below for Micro & Small Enterprises, Medium Enterprises & Non MSME bidder: -</p> <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="width: 50%;">Type of Bidder</th> <th style="width: 50%;">Payment Timelines (Number of days)</th> </tr> </thead> <tbody> <tr> <td>Micro & Small Enterprises</td> <td style="text-align: center;">45 days</td> </tr> </tbody> </table>	Type of Bidder	Payment Timelines (Number of days)	Micro & Small Enterprises	45 days
Type of Bidder	Payment Timelines (Number of days)				
Micro & Small Enterprises	45 days				

SPECIAL CONDITIONS OF CONTRACT (SCC)

	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Medium Enterprises</td> <td style="width: 50%;">60 days</td> </tr> <tr> <td>Non MSME</td> <td>90 days</td> </tr> </table>	Medium Enterprises	60 days	Non MSME	90 days
Medium Enterprises	60 days				
Non MSME	90 days				
	<p>ii) Applicable GST shall be released upon compliance of following:</p> <ul style="list-style-type: none"> ▪ Vendor has declared such Invoice in their GSTR-1 & has paid the tax to the Government by filing GSTR-3B or any other return/form for payment of tax so that Vendor's invoice details appear in BHEL's GSTR-2A. Payment may not be released if above is not complied & invoice details do not appear in BHEL's GSTR-2A. 				
6.2	<p><u>PAYMENT FOR EXPERT SUPERVISION FOR BOQ ITEM NO. 2:</u></p> <p>100% of the Price of Expert Supervision provided as per item No. 2 of Rate Schedule shall be paid through RTGS / NEFT / Wire transfer on pro-rata man-days basis.</p> <p>Payment shall be made monthly on the basis of consumed man-days certified by BHEL Engineer In- Charge at Sipat Site.</p>				
6.3	<p><u>PAYMENT FOR WET STACK FLOW MODEL STUDY FOR BOQ ITEM NO. 3:</u></p> <p>a) 75% Basic Payment (along with 100% Taxes & Duties, as applicable) shall be made after approval of study model report by BHEL/ BHEL's customer.</p> <p>b) Balance 25% shall be made on completion of application work certified by Project Site Engineer of Owner/ Purchaser within one month from date of completion of application work.</p> <p>c) Number of wet stack flow model study indicated in BOQ is tentative only. BHEL may ask bidder to perform Wet Stack Flow Model Study as per requirement. Payment shall be made on actual number of Wet stack flow model study carried by the bidder.</p>				
6.7	<p>Deviation in payment term is not encouraged. In rare case, for any deviation sought in credit based Payment terms by bidder w.r.t. payment term, following loading shall be followed during evaluation of price bids:</p> <p>Base rate of State Bank of India (SBI) (as applicable on the date of bid opening; Techno-commercial bid opening in case of two part bids) + 6%; shall be considered for loading for the period of relaxation sought by bidders.</p>				
7.0	<p>PERFORMANCE BANK GUARANTEE / GUARANTEE DEPOSIT:</p>				

SPECIAL CONDITIONS OF CONTRACT (SCC)

7.1	<p>A. Supplier shall furnish Performance Bank Guarantee of 5% of the respective Material Dispatch Clearance Certificate Value excluding taxes and duties against Guarantee Period as per Clause No. 2.2.1 (F) of TCC.</p> <p style="text-align: center;">OR</p> <p>B. Supplier shall deposit 5% of the respective Material Dispatch Clearance Certificate Value as Guarantee Deposit amount excluding taxes and duties against Guarantee Period as per Clause No. 2.2.1 (F) of TCC.</p> <p style="text-align: center;">OR</p> <p>C. Bidder can furnish the undertaking that equivalent amount of PBG (5% of the respective Material Dispatch Clearance Certificate Value) shall be recovered from the 1st bill.</p>
7.2	<p>Performance Bank Guarantee shall be furnished within 60 days from the date of Material Dispatch Clearance Certificate.</p> <p>I. <u>Penalty for delay in PBG submission</u></p> <p>Bidder agrees to submit performance security required for execution of the contract within the time period mentioned. In case of delay in submission of performance security, enhanced performance security which would include interest (SBI Base rate + 6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as per terms defined in NIT/ contract, from the bills along with due interest.</p>
7.3	The Bank Guarantee / Guarantee Deposit shall be kept valid till the successful trial operation of the unit and thereafter till the entire Guarantee Period as per Clause no. 8.0 of SCC.
8.0	Guarantee Period:
	Guarantee Period shall be 10 years from the date of successful trial operation of Unit System .
9.0	Inspection:
9.1	Supplier will intimate BHEL after readiness of 100% material at their works along with Manufacturing Test Certificate/Warranty Certificate. BHEL will issue MDCC (Material Dispatch Clearance Certificate) based on inspection category defined in approved MQP by NTPC/BHEL.

SPECIAL CONDITIONS OF CONTRACT (SCC)

9.2	Material shall be dispatched only after issuance of MDCC (Material Dispatch Clearance Certificate) by BHEL.
10.0	DELIVERY FAILURE AND TERMINATION / LIQUIDATED DAMAGES :
	Timely dispatch/ delivery as stipulated in Order/ Contract shall be the essence of Order/ Contract. If the Seller fails to complete the dispatch within the time period stipulated in Order/ Contract, or within any extension of time granted by Purchaser, it shall be lawful for Purchaser to recover damages for breach of Order/ Contract without prejudice to any other rights and/ or remedies provided for, in the Order/ Contract and hereunder:
10.1	<u>DELAYED DELIVERY FOR SUPPLY OF BOROSILICATE GLASS BLOCK:</u> LD shall be 0.5% of the total order value (excluding Taxes) of undelivered material per week of delay or part thereof subject to a maximum of 10% of the total order value (excluding Taxes).
10.2	<u>Liquidated Damages Loading:</u> In case bidder is not accepting the penalty clause for delayed supply, the offer of bidder shall be loaded to the extent to which it is not agreed by the bidder during price bid evaluation.
11.0	TENDERER TO INFORM HIMSELF FULLY: It is the responsibility of tenderer to keep himself informed about all taxes & duties applicable on materials/ services as prevailing at the time of tendering. If the rates assumed by tenderer are less than the tariff rates prevailing at the time of tendering, the tenderer will be himself responsible for such under quotations.
12.0	Ordering by BHEL A. If there is any shortfall in the requirement of Borosilicate during the currency of the Contract, there shall be no commercial implication on BHEL. B. BHEL may short close the contract at any stage without assigning any reasons C. Material Dispatch Clearance Certificate (MDCC) shall be issued by BHEL PSWR Nagpur material shall be dispatched by supplier unless and until Material Dispatch Clearance Certificate (MDCC) issued by BHEL. D. Performance Bank Guarantee will have to be furnished to the concerned BHEL PSWR Nagpur.

SPECIAL CONDITIONS OF CONTRACT (SCC)

	<p>E. Payments related documentations will have to be furnished to the Construction manager, NTPC Sipat FGD site.</p>
13.0	<p><u>Transit Insurance:</u></p> <p>Transit insurance from supplier's works/warehouse to BHEL site stores shall be arranged by BHEL. Upon dispatch of material supplier has to immediately intimate underwriter of BHEL failing which transit loss if any would be borne by supplier.</p>
14.0	<p>All circulars issued by Indian Ministries from time to time shall be applicable.</p>
15.0	<p>Void</p>
16.0	<p>Void</p>
17.0	<p><u>Rights of BHEL</u></p> <p>a) BHEL does not guarantee ordering of any specific quantity. BHEL reserves the right to negotiate or re-float the tender if the lowest offered price is not found competitive.</p> <p>b) In the event of our customer order covering this tender being cancelled / placed on hold / otherwise modified, BHEL would be constrained to accordingly cancel / hold / modify the tender/PO at any stage.</p>
18.0	<p><u>Patent Right</u></p> <p>The supplier shall at all times, indemnify and keep indemnified the purchaser, free of cost, against all claims which may arise in respect of goods and services to be provided by the supplier under the contract for infringement of any intellectual property rights or any other right protected by patent, registration of designs or trademarks. In the event of any such claim in respect of alleged breach of patent, registered designs, trademarks etc. being made against the purchaser, the purchaser shall notify the supplier of the same and the supplier shall, at his own expenses take care of the same for settlement without any liability to the purchaser.</p>
19.0	<p><u>Cartel Formation</u></p> <p>All the firms shall desist from forming cartel as the practice is prohibited under Section 3(3) (a) & (d) of the competition Act 2002. If any such instance is observed during the tender, it will attract disciplinary action as per BHEL policies.</p>

SPECIAL CONDITIONS OF CONTRACT (SCC)

20.0	<p><u>General Terms</u></p> <p>a) Offer must be submitted in Two-Part Bid only i.e. techno-commercial bid and price bid separately. Single bid offer shall be liable for rejection.</p> <p>b) Consortium bidding is not allowed for the subject tender</p> <p>c) A person signing (manually or digitally) the tender form or any documents forming part of the contract on behalf of another shall be deemed to warranty that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, cancel the contract and hold the signatory liable for all cost and damages.</p> <p>d) Part offer shall be rejected i.e. bidder must quote for the total tender quantity.</p> <p>e) Offers for Part Quantities on item level basis are not acceptable. Such partial offer would not be considered for evaluation and will be rejected.</p> <p>f) Bidder must quote the price elements mentioned in price schedule, if any element left blank shall be construed as the price is included FOR price, as the case may be.</p> <p>g) Bidder shall fill the rates only in the Price format given. Other papers or documents along with the price bid inscribing the rates of material shall be liable for rejection</p> <p>h) If any Supplier attempts to bribe, or pay commission, gift or any advantage or bring in undue influence either by himself or on his behalf any one including a stranger to the tender, in addition to instituting legal proceedings as per the extant laws prevailing, will disqualify the supplier from the tender and all future tenders of BHEL. Decision of the Purchaser would be final in this matter.</p> <p>i) In case the day up to which the tenders are to remain valid falls on/ subsequently declared a holiday or closed day for the Purchaser, the tender validity shall automatically be extended up to the next working day.</p>
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SPECIAL CONDITIONS OF CONTRACT (SCC)

21.0	<p>1. Along with offer Bidder has to submit Make/Manufacturer of Borosilicate Glass block, Epoxy Primer and Adhesive Membrane in compliance with Technical PQR of the bid document:-</p>	
	Description	Name of manufacturer
	Borosilicate Glass Block	
	Epoxy Primer	
	Adhesive Membrane	
<p>2) Bidder has to submit name of Agency to carry out Wet Stack Flow Study in compliance with Technical PQR of the bid document:-</p>		
Description	Name of agency	
Wet Stack Flow Study		

BOROSILICATE GLASS BLOCK LINING SYSTEM ON CHIMNEY MS FLUE CAN & DUCT TRANSITION PIECE at 2x500 MW NTPC Sipat FGD Stage II Unit 4 & 5			
			Sipat
SL No.	Item Description	Unit	Qty
1	Design and Supply of Borosilicate Glass Block Lining System		
1.1	Design and supply of borosilicate glass block lining system for Chimney flue can and Chimney Duct transition piece consisting of minimum 38 mm thick closed cell borosilicate glass block, two component adhesive membrane having a minimum thickness of 3 mm and suitable epoxy primer including testing of material, getting approval of design/drawings and installation procedure from BHEL/NTPC , ten years full replacement guarantee (including cost of material, installation and arrangement for installation etc. required for replacement) etc. all complete as per specification, drawings and as directed by the Engineer-in-charge. Quantity for payment shall be the area covered by the borosilicate glass block lining system.		
1.11a	For Chimney flue can	SqM (Square Meter)	5200
1.1b	For Chimney Duct transition piece	SqM (Square Meter)	1266
2	Expert supervision		
2.1	Expert supervision by manufacturer/supplier during surface preparation of substrate, application of primer, mixing of two components adhesives membrane, application of adhesive membrane, installation of borosilicate etc. all complete. Installation of borosilicate lining shall be done under controlled temperature and humidity conditions, as mentioned in specification all complete. Note : Mixing Machine shall be provided by Manufacturer / Supplier on Free of Cost (FOC) basis.		
2.1a	For Chimney flue can	Man-days	90
2.1b	For Chimney Duct transition piece	Man-days	22
3	Wet Stack Flow Model Study		
-	Wet Stack Flow Model Study - The study shall comprise of the following as minimum:		
3.1	Condensation calculations & design of condensate collection system		
3.2	A scale physical flow model for liquid collector system (LCS) design.		
3.3	A computational flow model for plume downwash analysis.		
3.4	A physical or computational flow model for CEMS elevation flow performance.		
3.5	Design of optimum choke geometry, if required.		
3.6	Review & Approval of liquid collector system construction drawings.		
3.7	Site inspection & supervision for 7 days to verify and evaluate LCS system performance prior to commissioning.		
-	No. of Studies to be considered - 1 No.(One)	Lumpsum	1

INTEGRITY PACT**Between**

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

and

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

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for _____ Tender Enq. No. 2201086 - Design, Supply and Expert Supervision for installation works of Borosilicate Glass Block Lining for chimney flue can & duct transition piece including Wet Stack Flow Model Study at 2x500 MW NTPC Sipat Stage II EGD Project.

_____ (hereinafter referred to as "Contract"). The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

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

Section 1- Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

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

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. The Bidder(s)/ Contractor(s) commits himself to observe the following principles during participation in the tender process and during the contract execution.

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

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

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

Section 4 - Compensation for Damages

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

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 (three) years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason or action can be taken as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

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

- 6.1 The Principal will enter into Integrity Pacts with identical conditions as this Integrity Pact with all Bidders and Contractors.
- 6.2 In case of Sub-contracting, the Principal Contractor shall take the responsibility of the adoption of Integrity Pact by the Sub-contractor(s) and ensure that all Sub-contractors also sign the Integrity Pact.
- 6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity Pact or violate its provisions.

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

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

Section 8 -Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible panel of Independent External Monitor (s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact.
- 8.2 The IEMs are not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as Secret/Top Secret are not to be disclosed.
- 8.4 The Principal will provide to the IEMs sufficient information about all meetings among the parties related to the Contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the IEMs the option to participate in such meetings.

- 8.5 The advisory role of IEMs is envisaged as that of a friend, philosopher and guide. The advice of IEMs would not be legally binding and it is restricted to resolving issues raised by a Bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some Bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process or during execution of Contract, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to the CMD, BHEL at the earliest. They may also send their report directly to the CVO, in case of suspicion of serious irregularities requiring legal/ administrative action. Only in case of very serious issue having a specific, verifiable Vigilance angle, the matter should be reported directly to the Commission. IEMs will tender their advice on the complaints within 30 days.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the IEMs and its terms and conditions.
- 8.9 IEMs should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the Principal should be looked into by the CVO of the Principal.
- 8.10 If the IEMs have reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code / Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs. Issues like warranty/ guarantee etc. shall be outside the purview of IEMs.
- 8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.
- 8.13 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration


- 9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties till the final completion of contract for successful Bidder, and for all other Bidders 6 months after the Contract has been awarded. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.
- 9.2 If any claim is made/ lodged during currency of this Integrity Pact, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.
- 10.2 Changes and supplements as well as termination notices need to be made in writing.
- 10.3 If the Bidder(s)/ Contractor(s) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.
- 10.4 Should one or several provisions of this Integrity Pact turn out to be invalid, the remainder of this Integrity Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this Integrity Pact with the Principal would be competent to participate in the bidding. In other words, entering into this Integrity Pact would be a preliminary qualification.
- 10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as the terms & conditions of the Contract. The fees/expenses on dispute resolution through mediation shall be shared by both the parties. Further, the mediation proceedings shall be confidential in nature and the parties shall keep confidential all matters relating to the mediation proceedings including any settlement agreement arrived at between the parties as outcome of mediation. Any views expressed, suggestions, admissions or proposals etc. made by either party in the course of mediation shall not be relied upon or introduced as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the dispute that is the subject of mediation proceedings. Neither of the parties shall present IEMs as witness in any Alternative Dispute Resolution or judicial proceedings in respect of the dispute that was subject of mediation.

Rasuraman

 For & On behalf of the Principal
 (Office Seal)



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

Place Nagpur
 Date _____

Witness: _____
 (Name & Address) _____

Witness: _____
 (Name & Address) _____

Clause on IP in the tender

Integrity Pact (IP)

- (a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

SI	IEM	Email
1.	Shri Otem Dai, IAS (Retd.)	iem1@bhel.in
2.	Shri Bishwamitra Pandey, IRAS (Retd.)	iem2@bhel.in
3.	Shri Mukesh Mittal, IRS (Retd.)	iem3@bhel.in

- (b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.
- (c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:

Details of contact person(s):

(1)
Name: Rakesh Mohan Malhotra
Deptt: Purchase
Address: BHEL, PSWR, Nagpur
Phone: (Landline/ Mobile)
0712-2858633
Email: rmalhotra@bhel.in
Fax: 0712-2858699

(2)
Name: Rajiv Kumar
Deptt: Purchase
Address: BHEL, PSWR, Nagpur
Phone: (Landline/ Mobile)
0712-2858722
Email: rajivkumar@bhel.in
Fax: 0712-2858699