



भारत हेवी इलेक्ट्रिकल्स लिमिटेड  
(भारत सरकार का उपक्रम)

**BHARAT HEAVY ELECTRICALS LIMITED**  
(A Govt. of India Undertaking)

Ref: PSER:SCT:KGN-S2009:7766

Date: 10-01-2020

**NOTICE INVITING TENDER**

NOTE: INTENDING BIDDER TO PARTICIPATE MAY DOWNLOAD FROM WEB SITES

Sealed offers in two part bid system are invited from reputed & experienced bidders meeting PRE QUALIFICATION CRITERIA as mentioned in Annexure-1 **through E-Procurement Portal <https://bhel.abcprocure.com> only**, for the subject job by the undersigned on the behalf of BHARAT HEAVY ELECTRICALS LIMITED as per the tender document. Issue/ forwarding intimation regarding tender to any bidder shall not construe that the bidder is considered to be qualified. Consideration of their offer is subject to CUSTOMER APPROVAL & compliance of loading criteria as per clause no. 8.0 of NIT etc. Following points relevant to the tender may please be noted and complied with.

1.0 Salient Features of NIT

SL NO	ISSUE	DESCRIPTION
i	TENDER NUMBER	PSER:SCT:KGN-S2009:19
ii	Broad Scope of job	<i>Receipt, Unloading, Storage, Dismantling, New Material Erection, Re-Erection of Old Items, Modification of existing Items, Restoration, Commissioning, Testing &amp; PG Test of Combustion Modification System for NOx Mitigation of of U#5,6 &amp; 7, STG-II (3X500MW) at NTPC -KAHALGAON STPS, Bihar</i>
iii	DETAILS OF TENDER DOCUMENT	
a	Volume-IA	<i>General conditions of contract (Supply)</i>
b	Volume-IB	<i>General conditions of contract (Service)</i>
c	Volume-IC	<i>Special conditions of contract (Supply)</i>
d	Volume-ID	<i>Special conditions of contract (Service)</i>
e	Volume-IE	<i>Forms and Procedures etc.</i>
f	Volume-IF	<i>Technical Conditions of Contract (TCC) (TCC-CML, DRG)</i>
g	Volume-III	<i>Price Schedule (Absolute value) - Rev-00</i>
iv	ISSUE OF TENDER DOCUMENTS	<i>This is an E-tender floated online through our E-Procurement Site <a href="https://bhel.abcprocure.com">https://bhel.abcprocure.com</a>. Start date of the tender: 10-1-2020.</i>
v	DUE DATE & TIME OF OFFER SUBMISSION	<i>Date: 31-01-2020, Time: 15-00 Hrs. The bidder should respond by submitting their offer online in our e-Procurement platform at <a href="https://bhel.abcprocure.com">https://bhel.abcprocure.com</a> only. Offers are invited in two-parts only. Hard copy bid or bids through email/fax shall not be accepted.</i>
vi	OPENING OF TENDER	<i>Date: 31-01-2020. 1 hour after the latest due date and time of Offer submission Notes: (1) In case the due date of opening of tender becomes a non-working day, tenders shall be opened on next working day at the same time. (2) Bidder may depute representative to witness the</i>

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		<i>opening of tender.</i>	
vii	EMD AMOUNT	<i>Rs. 5,44,144/-.</i>	<i>Applicable.</i>
viii	COST OF TENDER	<i>Rs. 2,500/-.</i>	<i>Applicable.</i>
ix	LAST DATE FOR SEEKING CLARIFICATION	<i>Date: 20-1-2020. Along with soft version also, addressing to undersigned &amp; to others as per contact address given below</i>	<i>Applicable.</i>
x	SCHEDULE OF Pre Bid Discussion (PBD)	--	<i>Not Applicable (In case BHEL decides to conduct PBD, date, time &amp; venue of PBD will be intimated suitably thru TCN.)</i>
xi	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)	--	<i>Not applicable.</i>
xii	Latest updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage ( <a href="http://www.bhel.com">www.bhel.com</a> ) ; CPP portal & E-Procurement Site <a href="https://bhel.abcprocure.com">https://bhel.abcprocure.com</a> only. Bidders to keep themselves updated with all such information.	<i>Shall be intimated to bidder.</i>

2.0 The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, duly digitally signed & stamped on each page, as part of offer. Rates/Price including discounts/rebates, if any, mentioned anywhere/ in any form in the techno-commercial offer other than the Price Bid, shall not be entertained.

3.0 Unless specifically stated otherwise, bidder shall remit cost of tender (non-refundable) and courier charges if applicable, in the form of Demand Draft drawn in favour of Bharat Heavy Electricals Ltd, payable at Kolkata, issuing the Tender, along with techno-commercial offer.

4.0 Unless specifically stated otherwise, bidder shall have to deposit EMD through Demand Draft/Pay Order in favour of Bharat Heavy Electricals Ltd, payable at Kolkata. For other details please refer General Conditions of Contract.  
Bidders may please be noted that "OEMD" provision stands deleted. Hence, bidders who have deposited Rs. 2 Lakh as OEMD are also requested to submit fresh EMD as mentioned in sl no vii under clause no 1.0 of NIT.

5.0 Procedure for Submission of Tenders: The Tenderers must submit their Tenders as detailed below:

#### DOCUMENTS TO BE UPLOADED & MODALITY OF UPLOADING

Sl no	Description	Remarks
PART-I A	(TECHNO COMMERCIAL BID)	
	CONTAINING THE FOLLOWING:-	
i.	Covering letter/Offer forwarding letter of Tenderer. ( <b>To be attached in relevant Attachment section</b> )	

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ii.	Duly filled-in 'No Deviation Certificate' as per prescribed format. (To be attached in relevant Attachment section)  <u>Note:</u> a. In case of any deviation, the same should be submitted separately for technical & commercial parts, indicating respective clauses of tender against which deviation is taken by bidder. The list of such deviation shall be attached in relevant attachment section of the e -procurement portal. It shall be specifically noted that deviation recorded elsewhere shall not be entertained.  b. BHEL reserves the right to accept/reject the deviations without assigning any reasons, and BHEL decision is final and binding. i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL ii). In case of unacceptable deviations, BHEL reserves the right to reject the tender	
iii.	Supporting documents/ annexures / schedules/ drawing etc as required in line with Pre-Qualification criteria.  It shall be specifically noted that all documents as per above shall be attached in relevant attachment section and credential certificates issued by clients shall distinctly bear the name of organization, contact ph no, FAX no, etc.	
iv.	All Amendments/Correspondences/Corrigenda/Clarifications/Changes/ Errata etc pertinent to this NIT. (To be attached in relevant Attachment section)	
v.	Integrity Pact Agreement (Duly signed by the authorized signatory)	Not Applicable.
vi.	Duly filled-in annexures, formats etc as required under this Tender Specification/NIT (To be attached in relevant Attachment section)	
vii.	Notice inviting Tender (NIT) (To be attached in relevant Attachment section)	
viii.	Volume – I F: Technical Conditions of Contract (TCC) (To be attached in relevant Attachment section)	
ix.	Volume – I D: Special Conditions of Contract (SCC)-Service (To be attached in relevant Attachment section)	
x.	Volume – I B : General Conditions of Contract (GCC)-Service (To be attached in relevant Attachment section)	
xii.	Volume – I E: Forms & Procedures etc. (To be attached in relevant Attachment section)	
xiii.	Volume-III - (UNPRICED – without disclosing rates/price, but mentioning only 'QUOTED' or 'UNQUOTED' against each item. (To be attached in Unpriced Bid Attachment section)	
xiv.	Any other details preferred by bidder with proper indexing. (To be attached in relevant Attachment section)	

<b>PART-I B</b>	EMD/ COST OF TENDER (To be submitted offline within due date of offer submission)	
	<b>CONTAINING THE FOLLOWING:-</b>	
i.	1. Earnest Money Deposit (EMD) in the form as indicated in this Tender  2. Cost of Tender (Demand Draft or copy of Cash Receipt as	

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	the case may be)	
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<b>PART-II</b>	<b>PRICE BID (TO BE ATTACHED IN PRICE BID ATTACHMENT SECTION)</b>	
	<b>CONTAINING THE FOLLOWING:-</b>	
i	Covering letter/Offer forwarding letter of Tenderer enclosed in Part-I	
ii	Volume III – PRICE BID (Duly Filled in Schedule of Rates – rate/price to be entered in words as well as figures) Any other document uploaded in the price bid, apart from above tender format, shall not be taken into cognizance for evaluation of offer.	

**SPECIAL NOTE:**

- A) Your offer & documents submitted along with offer shall be digitally signed & stamped in each page by your authorised representative. No overwriting/ correction in tender documents by bidders shall be allowed. However, if correction is unavoidable, the same may be signed by authorized signatory.
- B) The credentials/ documents submitted towards compliance of Pre-qualification requirement shall be physically signed by the authorized signatory & stamped before uploading/submission with the offer in the e-procurement portal.
- C) All documents/ annexures submitted with the offer shall be properly attached in the respective sections. BHEL shall not be responsible for any missing documents.

6.0 No Deviation with respect to tender clauses and no additional clauses/ suggestions/ in Techno-commercial bid/ Price bid shall normally be considered by BHEL. Bidders are requested to positively comply with the same.

7.0 BHEL reserves the right to accept or reject any or all Offers without assigning any reasons thereof. BHEL also reserves the right to cancel the Tender wholly or partly without assigning any reason thereof. Also BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).

**8.0 Assessment of Capacity of Bidders:**

Bidder's capacity for executing the job under tender shall be assessed 'LOAD' wise and 'PERFORMANCE' wise as per the following:

- I. **LOAD:** Load takes into consideration ALL the contracts of the Bidder under execution with BHEL Regions, irrespective of whether they are similar to the tendered scope or not. The cut off month for reckoning 'Load' shall be the 3<sup>rd</sup> Month preceding the month corresponding to the 'latest date of bid submission', in the following manner -  
(Note: For example, if latest bid submission is in Jan 2017, then the 'load' shall be calculated up to and inclusive of Oct 2016)

Total number of Packages in hand = Load (P)

Where 'P' is the sum of all unit wise identified packages (refer table-1) under execution with BHEL Regions as on the cut off month defined above, including packages yet to be commenced, excepting packages which are on Long Hold.

- II. **PERFORMANCE:** Here 'Monthly Performance' of the bidder for all the packages (under execution/ executed during the 'Period of Assessment' in all Power Sector Regions of BHEL) SIMILAR to the packages covered under the tendered scope, excepting packages not commenced shall be taken into consideration. The 'Period of Assessment' shall be 6 months preceding and including the cut off month. The cut off month for reckoning 'Period of Assessment' shall be the 3<sup>rd</sup> Month preceding the month corresponding to 'latest date of bid submission', in the following manner:

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**(Note:** For example, if 'latest date of bid submission' is in Jan 2017, then the 'performance' shall be assessed for a 6 months' period up to and inclusive of Oct 2016 (i.e. from May 2016 to Oct 2016), for all the unit wise identified packages (refer Table I))

i). Calculation of Overall 'Performance Rating' for 'Similar Package/Packages' for the tendered scope under execution at Power Sector Regions for the 'Period of Assessment':

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for all the similar Package/packages', divided by the total number of Package months for which evaluation should have been done, as per procedure below:

- $P_1, P_2, P_3, P_4, P_5, \dots, P_N$  etc. be the packages (under execution/ executed during the 'Period of Assessment' in all Regions of BHEL) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced. Total number of similar packages for all Regions =  $P_T$  (i.e.  $P_T = P_1 + P_2 + P_3 + P_4 + \dots + P_N$ )
- Number of Months ' $T_1$ ' for which 'Monthly Performance Evaluation' as per relevant formats, should have been done in the 'Period of Assessment' for the corresponding similar package  $P_1$ . Similarly  $T_2$  for package  $P_2$ ,  $T_3$  for package  $P_3$ , etc. for the tendered scope. Now calculate cumulative total months ' $T_T$ ' for total similar Packages ' $P_T$ ' for all Regions (i.e.  $T_T = T_1 + T_2 + T_3 + \dots + T_N$ )
- Sum ' $S_1$ ' of 'Monthly Performance Evaluation' Scores ( $S_{1,1}, S_{1,2}, S_{1,3}, S_{1,4}, S_{1,5}, \dots, S_{1,T_1}$ ) for similar package  $P_1$ , for the 'period of assessment' ' $T_1$ ' (i.e.  $S_1 = S_{1,1} + S_{1,2} + S_{1,3} + S_{1,4} + S_{1,5} + \dots + S_{1,T_1}$ ). Similarly,  $S_2$  for package  $P_2$  for period  $T_2$ ,  $S_3$  for package  $P_3$  for period  $T_3$  etc. for the tendered scope for all Regions. Now calculate cumulative sum ' $S_T$ ' of 'Monthly Performance Evaluation' Scores for total similar Packages ' $P_T$ ' for all Regions (i.e. ' $S_T = S_1 + S_2 + S_3 + S_4 + S_5 + \dots + S_N$ ')
- Overall Performance Rating ' $R_{BHEL}$ ' for the Similar Package/Packages (under execution/ executed during the 'Period of Assessment') in all the Power Sector Regions of BHEL

$$\begin{aligned}
 & \text{Aggregate of Performance scores for all similar packages in all the Regions} \\
 & = \frac{\text{Aggregate of months for each of the similar packages for which performance should have been evaluated in all the Regions}}{S_T} \\
 & = \frac{T_T}{S_T}
 \end{aligned}$$

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

Sl. No.	Item Description	Details for all Regions								Total
		(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	
1	Similar Packages for all Regions → (under execution/ executed during period of assessment)	$P_1$	$P_2$	$P_3$	$P_4$	$P_5$	...	$P_N$	Total No. of similar packages for all Regions = $P_T$ i.e. Sum ( $\Sigma$ ) of columns (iii) to (ix)	

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Sl. No.	Item Description	Details for all Regions							Total
		(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	
2	Number of Months for which 'Monthly Performance Evaluation' as per relevant formats should have been done in the 'period of assessment' for corresponding Similar Packages ( as in row 1)	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	T <sub>4</sub>	T <sub>5</sub>	...	T <sub>N</sub>	Sum (Σ) of columns (iii) to (ix) = T <sub>T</sub>
3	Monthly performance scores for the corresponding period (as in Row 2)	S <sub>1-1</sub> , S <sub>1-2</sub> , S <sub>1-3</sub> , S <sub>1-4</sub> , ... S <sub>1-T1</sub>	S <sub>2-1</sub> , S <sub>2-2</sub> , S <sub>2-3</sub> , S <sub>2-4</sub> , ... S <sub>2-T2</sub>	S <sub>3-1</sub> , S <sub>3-2</sub> , S <sub>3-3</sub> , S <sub>3-4</sub> , ... S <sub>3-T3</sub>	S <sub>4-1</sub> , S <sub>4-2</sub> , S <sub>4-3</sub> , S <sub>4-4</sub> , ... S <sub>4-T4</sub>	S <sub>5-1</sub> , S <sub>5-2</sub> , S <sub>5-3</sub> , S <sub>5-4</sub> , ... S <sub>5-T5</sub>	..	S <sub>N-1</sub> , S <sub>N-2</sub> , S <sub>N-3</sub> , S <sub>N-4</sub> , ... S <sub>N-TN</sub>	-----
4	Sum of Monthly Performance scores of the corresponding Package for the corresponding period (as in row-3)	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	S <sub>4</sub>	S <sub>5</sub>	...	S <sub>N</sub>	Sum (Σ) of columns (iii) to (ix) = S <sub>T</sub>

ii). Calculation of Overall 'Performance Rating' (R<sub>BHEL</sub>) in case at least 6 evaluation scores for 'similar Package/Packages' for the tendered scope ARE NOT AVAILABLE, during the 'Period of Assessment':

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

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

In case, R<sub>BHEL</sub> cannot be calculated as above, then Bidder shall be treated as 'NEW VENDOR'. Further eligibility and qualification of this bidder shall be as per definition of 'NEW VENDOR' described in 'Explanatory Notes'.

iii). Factor "L" assigned based on Overall Performance Rating (R<sub>BHEL</sub>) at Power Sector Regions:

Sl. no.	Overall Performance Rating (R <sub>BHEL</sub> )	Corresponding value of 'L'
1	=60	NA
2	> 60 and ≤ 65	0.4
3	> 65 and ≤ 70	0.35
4	> 70 and ≤ 75	0.25
5	> 75 and < 80	0.2
6	≥ 80	NA

III. 'Assessment of Capacity of Bidder':

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

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Max number of packages  $P_{Max} = (R_{BHEL} - 60)$  divided by corresponding value of 'L', i.e.  $(R_{BHEL} - 60)/L$

Note:

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

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

Note: For the transition period of 1 year (i.e. for all the NITs floated between 11<sup>th</sup> May 2019 to 10<sup>th</sup> May 2020), in addition to above, 'Assessment of Capacity of Bidder' shall also be calculated considering 'performance scores' till 36 months as per Sl. no II ii).

Higher of the results obtained out of both shall be considered for 'Assessment of Capacity of Bidder'.

**IV. Explanatory note:**

- i). Similar package means Boiler or ESP or Piping or Turbine or Civil or Structure or Electrical or C&I etc. at the individual level irrespective of rating of Plant and irrespective of whether the subject tender is a single package or as part of combined/composite packages. Normally Boiler, ESP, Piping, Turbine, Electrical, C&I, Civil, Structure etc. is considered individual level of package. For example, in case the tendered scope is a Boiler Vertical Package comprising of Boiler, ESP and Power Cycle Piping (i.e. the 'identified packages as per Table-1 below), the 'PERFORMANCE' part against sl.no. II above, needs to be evaluated considering all the identified packages (i.e. Boiler, ESP and Power Cycle Piping) and finally the Bidder's capacity to execute the tendered scope is assessed in line with III above.
- ii). Identified Packages (Unit wise)

Table-1

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

- iii). Bidders who have not been evaluated for at least six package months in the last 24 months preceding and including the Cut-off month in the online BHEL system for contractor performance evaluation in BHEL PS Regions, shall be considered "NEW VENDOR".

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

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

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The “FIRST TIMER” tag shall remain till completion of all the contracts against which vendor has been tagged as First Timer or availability of 6 evaluation scores within last 24 months preceding and including the Cut-off month in the online BHEL system for contractor performance evaluation in BHEL PS Regions.

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

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

- iv). Consequent upon applying the criteria of ‘Assessment of Capacity of Bidders’ detailed above on all the bidders qualified against Technical and Financial Qualification criteria, if the number of qualified bidders reduces to less than four, then for further processing of the Tender, BHEL at its discretion reserves the right to also consider the bidders who are “not qualified” as per criteria of ‘Assessment of Capacity of Bidders’ and for this, procedure described in following three options shall be followed:
  - a) All the bidders having Overall Performance Rating ( $R_{BHEL}$ )  $\geq 60$  shall be considered qualified against criteria of ‘Assessment of Capacity of Bidders’.
  - b) If even after using option “a”, the number of qualified bidders remains less than four, then in addition to bidders considered as per option “a”, “First timer” bidders having average of available performance scores  $\geq 60$  upto and including the Cut Off month shall also be considered qualified against criteria of ‘Assessment of Capacity of Bidders’.
  - c) If even after using option “a” and “b”, the number of qualified bidders remains less than four, then in addition to bidders considered as per option “a” and “b”, “First timer” bidders for whom no performance score is available in the system upto and including the Cut Off month, shall also be considered qualified against criteria of ‘Assessment of Capacity of Bidders’.

Note:- In case, the number of bidders qualified against Technical and Financial Qualification criteria itself is less than four, then all bidders (a)- having Overall Performance Rating ( $R_{BHEL}$ )  $\geq 60$ , (b)- First timer” bidders having average of available performance scores  $\geq 60$  upto and including the Cut Off month, (c)- “First timer” bidders for whom no performance score is available in the system upto and including the Cut Off month, shall be considered qualified against criteria of ‘Assessment of Capacity of Bidders’ for further processing of tender.

- v). ‘Under execution’ shall mean works in progress as per the following:
  - a. Up to execution of 90% of anticipated Contract Value in case of Civil, MM, Structural and Turbo Blower Packages
  - b. Up to Steam Blowing in case of Boiler/ESP/Piping Packages
  - c. Up to Synchronization in all Balance Packages

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

- vi). Contractor shall provide the latest contact details i.e. mail-ID and Correspondence Address to SCT Department, so that same can be entered in the Contractor Performance Evaluation System, and in case of any change/discrepancy same shall be informed immediately. Login Details for viewing scores in Contractor Performance Evaluation System shall be provided to the Contractor by SCT Department.
- vii). Performance Evaluation for Activity Month shall be completed in Evaluation Month (i.e. month next to Activity Month) or in rare cases in Post Evaluation Month (i.e. month next to Evaluation Month) after approval from Competent Authority. In case scores are not acceptable, Contractor can submit Review Request to GM Site/ GM Project latest by 25<sup>th</sup> of Evaluation Month or 3 days after approval of score, whichever is later. However, acceptance/rejection of ‘Review Request’ solely depends on the discretion

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of GM Site/GM Project. After acceptance of Review Request, evaluation score shall be reviewed at site and the score after completion of review process shall be acceptable and binding on the contractor.

- viii). Project on Hold due to reasons not attributable to bidder -
  - a. Short hold: Evaluation shall not be applicable for this period, however Loading will be considered.
  - b. Long hold: Short hold for continuous six months and beyond or hold on account of Force Majeure shall be considered as Long Hold. Evaluation as well as Loading shall not be considered for this period.
- ix). Performance evaluation in CL 8 above is applicable to Prime bidder and Consortium partner (or Technical tie up partner) for their respective scope of work.

- 9.0 Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation, applicable wage structure, wage rules, etc before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions.
- 10.0 For any clarification on the tender document, the bidder may seek the same in writing, through e-mail or through E-Procurement Site <https://bhel.abcprocure.com>, 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 any delay. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.
- 11.0 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.
- 12.0 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.
- 13.0 Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
- 14.0 Bidders shall submit Integrity Pact Agreement (Duly signed by authorized signatory who signs in the offer), if applicable, along with techno - commercial bid. This pact shall be considered as a preliminary qualification for further participation. The names and other details of Independent External Monitor (IEM) for the subject tender is as given at point (xi) of 1 above.
- 15.0 The Bidder has to satisfy the Pre Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of satisfying the Pre Qualification Criteria specified in this NIT as per Annexure-1 (as applicable), past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD.
- 16.0 In case BHEL decides on a 'Public Opening', the date & time of opening of the PRICE BID shall be intimated to the qualified bidders and in such as case, price bid (Volume-III) uploaded in E-procurement Site <https://bhel.abcprocure.com> will be opened.

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

18.0 BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on [www.bhel.com](http://www.bhel.com)) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. Bidders to give their acceptance with the offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.

However, if reverse auction process is not adopted or is unsuccessful for whatsoever reason, absolute value price bid (Volume-III) uploaded in E-Procurement Site <https://bhel.abcprocure.com> will be opened for deciding the successful bidder. BHEL's decision in this regard will be final & binding on bidder.

Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit 'Process compliance form' (to the designated service provider) as well as 'Online sealed bid' in the Reverse Auction. Non-submission of 'Process compliance form' or 'Online sealed bid' by the agreed bidder(s) will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on [www.bhel.com](http://www.bhel.com)).

The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along with the offer. The envelope sealed price bid of successful L 1 bidder in RA, if conducted, shall also be opened after RA and the order will be placed on lower of the two bids (RA closing price & envelope sealed price) thus obtained. The bidder having submitted this offer specifically agrees to this condition and undertakes to execute the contract on thus awarded rates.

If it is found that L 1 bidder has quoted higher in online seal bid in comparison to envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender in the unit, it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on [www.bhel.com](http://www.bhel.com)).

As a reminder to the bidders, system will flash following message (in Red Color) during the course of 'online sealed bid':

"Bidders to submit online sealed bid less than or equal to their envelope sealed bid already submitted to BHEL"

In case BHEL decides to go for reverse auction, the H1 bidder (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.

19.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.

20.0 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.

21.0 The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.

22.0 Consortium Bidding (or Technical Tie up) shall be allowed only if specified in Pre Qualifying Requirement (PQR) criteria, and in such a case the details to be complied with is enclosed herewith as per Annexure-5 UNLESS SPECIFIED OTHERWISE IN PQR.

23.0 The bidder shall submit documents in support of possession of 'Qualifying Requirements' duly self certified and stamped/ digitally signed (as applicable) by the authorized signatory, indexed and properly linked in the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately.

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24.0 The bidder may have to produce original document for verification if so decided by BHEL.

25.0 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 Website ([www.bhel.com](http://www.bhel.com)).

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

a) 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.

b) Commitment by Bidder/ Supplier/ Contractor:

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

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

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

If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage includes 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.

26.0 It may please be noted that Guidelines/Rules in respect of Suspension of business dealings (Hold- 12 to 24 Months/ Banning – 3 years etc), Vendor Evaluation formats, quality, safety and HSE guidelines , standard T&P hire charges of BHEL etc may undergo change from time to time and the latest one shall be followed. Latest "Guidelines for Vendor Evaluation" is web based, quality, safety & HSE"; standard T&P hire charges shall be available at site and shall be given to the successful vendors/ subcontractors during execution.

27.0 MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS & DC, MSME) if they submit along with the offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or Udyog Aadhar Memorandum (UAM) & Acknowledgement or EM II certificate along with attested copy of a CA certificate (Format enclosed at Annexure – C where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer.

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Any Bidder falling under MSME category, shall furnish the following details & submit documentary evidence/Govt. Certificate etc. in support of the same along with their techno-commercial offer: -

Type under MSME	SC/ST owned	Women owned	Others
Micro			
Small			
Medium			

Note: - If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSME category.

28.0 The bidder along with its associates/collaborators/sub-contractors/sub-vendors/consultants/service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website [www.bhel.com](http://www.bhel.com) and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

29.0 Annexure-A -Amendment to GCC/SCC shall be read in conjunction with GCC-Volume-IB & SCC-Volume-ID. This Annexure-A (Amendment to GCC/SCC) of NIT shall not be considered as part of the NIT but addendum/corrigendum to the GCC/SCC only.

30.0 Annexure-B - Terms & conditions of Reverse Auction is enclosed herewith.

31.0 Annexure-D – Specific Clause w.r.t. BOCW Act & Cess Act is enclosed herewith.

32.0 Annexure-E- Statewise GST Registration nos. is enclosed herewith.

33.0 Duly filled & signed Annexure- CPP-GST/I to be submitted by bidders along with their techno-commercial offer.

34.0 **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	Address	Phone & Email
NOT APPLICABLE FOR THIS TENDER.			

(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:

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

Details of contact person(s):

Name	GARGI RAY	Subrata Sen
Dept	SCT Dept, BHEL PSER, Kolkata	SCT Dept, BHEL PSER, Kolkata
Address	DJ-9/1, Sector – II, Salt Lake, Kolkata – 700091	DJ-9/1, Sector – II, Salt Lake, Kolkata – 700091
Phone	033-2339 8229	033-2339 8226
Email	Gargi.ray@bhel.in	subrata.sen@bhel.in
FAX	033-2321 1960	033-2321 1960

35.0 For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/ PO/ WO against this NIT.

In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable.

36.0 Bidders are requested to submit their best price as per latest price schedule of the tender.

37.0 It may please be noted that Bid should be free from correction, overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid, else bid shall be liable for rejection.

All overwriting/ cutting, etc will be numbered by bid opening officials and announced during bid opening.

38.0 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:

- Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL
- Notice Inviting Tender (NIT)
- Price Bid-Volume-III
- Technical Conditions of Contract (TCC) -- Volume-IF
- Special Conditions of Contract (SCC) —Volume-ID
- General Conditions of Contract (GCC) —Volume-IB
- Forms and Procedures —Volume-IE

for BHARAT HEAVY ELECTRICALS LTD

Dy Mgr. (SCT)

Agency	Contact details	
BHEL, PSER, Kolkata	Address	DJ-9/1, Sector – II, Salt Lake, Kolkata – 700 091
	Phone no	033-2339 8236/ 8000
	FAX no	033-23211960
	E-mail	<a href="mailto:anupriya.mundu@bhel.in">anupriya.mundu@bhel.in</a> / <a href="mailto:papori@bhel.in">papori@bhel.in</a> / <a href="mailto:subrata.sen@bhel.in">subrata.sen@bhel.in</a>

Enclosure

- Annexure-1: Pre Qualification Criteria.
- Annexure-2: Format for No deviation Certificate.
- Annexure-3: Format for seeking clarification.
- Annexure-4: Check List.

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05. Annexure-5: Conditions for consortium/tie up.
06. Annexure -A- Amendment to GCC/SCC.
07. Annexure -B- Terms & conditions of Reverse Auction.
08. Annexure -C- CA certificate Format.
09. Annexure-D – Specific Clause w.r.t. BOCW Act & Cess Act.
10. Annexure-E- Statewise GST Registration nos.
11. Annexure- CPP-GST/I.
12. Other Tender documents as per this NIT.

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ANNEXURE-1**PRE QUALIFICATION CRITERIA**

Job	Receipt, Unloading, Storage, Dismantling, New Material Erection, Re-Erection of Old Items, Modification of existing Items, Restoration, Commissioning, Testing & PG Test of Combustion Modification System for NOx Mitigation of U#5,6 & 7, STG-II (3X500MW) at NTPC -KAHALGAON STPS, Bihar
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SL NO	CRITERIA
	<b>FINANCIAL</b>
1.0(a)	BIDDER SHOULD HAVE AVERAGE ANNUAL TURNOVER OF MINIMUM Rs 81.62 LAKHS DURING LAST 3 (THREE) FINANCIAL YEARS, ENDING ON 31-03-2019 AND SHOULD HAVE POSITIVE NET WORTH AS ON LATEST AUDITED ACCOUNTS AS SUBMITTED FOR PARA 1(c).
(b)	BIDDER MUST HAVE EARNED PROFIT IN ANY ONE OF THE LAST THREE FINANCIAL YEARS ENDING ON 31-03-2019. AUDITED BALANCE SHEET AND PROFIT & LOSS ACCOUNT OF THE COMPANY FOR LAST 3 (THREE) FINANCIAL YEARS, ENDING ON 31-03-2019 NEED TO BE SUBMITTED IN SUPPORT OF ABOVE.
(c)	IN CASE AUDITED BALANCE SHEET AND PROFIT & LOSS ACCOUNT HAS NOT BEEN SUBMITTED FOR ALL THREE YEARS INDICATED ABOVE (AS PER 1(b) above) THEN APPLICABLE FINANCIAL AUDITED STATEMENTS SUBMITTED BY THE BIDDER AGAINST THE REQUISITE THREE YEARS WILL BE AVERAGED FOR THREE YEARS.
(d)	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.
	<b>TECHNICAL</b>
2.0	BIDDER SHOULD HAVE EXECUTED FOLLOWING WORKS DURING LAST 7 (SEVEN) YEARS, ENDING ON LATEST DUE DATE OF OFFER SUBMISSION. RELEVANT SUPPORTING DOCUMENT SHALL BE SUBMITTED.
2.1	ERCTION & COMMISSIONING OF AT LEAST ONE BOILER (CONSISTING OF "PRESSURE PARTS" / "STRUCTURE" ) OF AN UNIT OF RATING $\geq 190$ MW OR
2.2	RENOVATION & MODERNIZATION OF AT LEAST ONE BOILER (CONSISTING OF PRESSURE PARTS) OF AN UNIT OF RATING $\geq 190$ MW OR
2.3	ONE OVERHAULING JOB OF (BOILER PRESSURE PARTS AND 'STRUCTURE / NON PRESSURE PARTS / ESP / ROTARY MACHINES / INSULATION/ PIPING / AUXILIARIES / DUCTING / ANY COMBINATION OF THESE PARTS') OF AN UNIT OF RATING $\geq 190$ MW
NOTE FOR SL NO 2.0 ABOVE	
THE WORD EXECUTED MEANS: THE WORK SHALL HAVE BEEN COMPLETED UPTO LIGHT UP OF BOILER EVEN IF THE CONTRACT HAS NOT BEEN COMPLETED OR CLOSED.	
3.0	BIDDER SHOULD HAVE "VALID CERTIFICATE OF RECOGNITION AS BOILER REPAIRER / ERECTOR WITH PRESSURE RATING CATEGORY CLASS-I OR ABOVE" FROM THE DIRECTOR OF BOILERS. RELEVANT SUPPORTING DOCUMENT SHALL BE SUBMITTED
4.0	BIDDER SHOULD HAVE VALID PAN RELEVANT SUPPORTING DOCUMENTS SHALL BE SUBMITTED.

NOTE	
A	BIDDER SHALL SUBMIT ABOVE PRE-QUALIFICATION CRITERIA FORMAT, DULY FILLED-IN, SPECIFYING RESPECTIVE ANNEXURE NUMBER AGAINST EACH CRITERIA AND FURNISH RELEVANT DOCUMENT IN THE RESPECTIVE ANNEXURES IN THEIR OFFER.
B	ONE MW IS EQUIVALENT TO 3.5 TPH WHERE EVER RATING OF BOILER IS MENTIONED IN TPH, FOR THE PURPOSE OF EVALUATION OF PQR.
C	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.

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D	AFTER SATISFACTORY FULFILLMENT OF ALL THE ABOVE CRITERIA, OFFER SHALL BE CONSIDERED FOR FURTHER EVALUATION AS PER NIT AND ALL OTHER TERMS OF THE TENDER
E	CONSIDERATION OF OFFER WILL BE SUBJECT TO CUSTOMER'S APPROVAL OF BIDDER
F	NO CONSORTIUM / JV BIDDING IS ALLOWED FOR THIS TENDER.

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**Explanatory Notes for the PQR (unless otherwise specified in the PQR):**

1. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated along with all annexures.
2. In case audited Financial statements have not been submitted for all the three years as indicated, then the applicable audited statements submitted by the bidders against the requisite three years, will be averaged for three years i.e total divided by three.
3. **NETWORTH** : Shall be calculated based on the latest Audited Accounts as furnished. Net worth = Paid up share capital + Reserves. (Net worth is required to be evaluated in case of companies)
4. **PROFIT** : shall be NET profit (PAT + Non cash expenditure viz depreciation) earned during any one of the three financial years.
5. 'Additional' Criteria in respect of 'Technical' criteria of PQR for Civil, Electrical, CI, unless otherwise specified:
  - i) 'Similar' work means
    - a. Piling or Civil or Structure or 'Civil and Structural works' or RCC Chimney or RCC Cooling Tower or RCC Silo or Mill Bunker or any combination of these shall be considered similar works for all packages mentioned under 'CIVIL WORKS'
    - b. Electrical or C&I or 'Electrical and C&I' shall be considered similar works for all packages mentioned under 'ELECTRICAL AND C&I WORKS'
6. Completion date for achievement of the 'Technical' criteria of PQR will be the last 7 years ending on the 'latest date of Bid submission' of Tender irrespective of date of the start of work
7. 'EXECUTED' means the bidder should have achieved the criteria specified in the Technical criteria of PQR even if the Contract has not been completed or closed
8. Unless otherwise specified, for the purpose of 'Technical' criteria of PQR, the word 'EXECUTED' means achievement of milestones as defined below:
  - a. "ACHIEVEMENT OF PHYSICAL QUANTITIES" as per respective PQRs.
  - b. "READINESS FOR COAL FILLING" in respect of Mill Bunker.
  - c. "CHARGING" in respect of Power Transformers / Bus Ducts / "HT/LT Switchgears" / "HT / LT Cabling".
  - d. For C&I works: "SYNCHRONISATION" in case of power project and "WORK COMPLETION of the value as defined in PQR" in case of industry.
  - e. "BOILER LIGHT UP" in respect of Boiler / CFBC / ESP.
  - f. "GAS IN" in respect of HRSG.
  - g. "STEAM BLOWING COMPLETION" in respect of Power Cycle Piping.
  - h. "HYDRAULIC TEST" of the system in respect of Pressure parts / LP Piping / CW Piping.
  - i. "FULL LOAD OPERATION OF THE UNIT" in respect of Insulation work.
  - j. "SYNCHRONISATION" in respect of STG / GTG.
  - k. "SPINNING" in respect of HTG.
  - l. "COMPLETION AND HANDING OVER FOR MECHANICAL ERECTION" in respect of STG Deck and Machine/Equipment foundation.
9. Boiler means HRSG or WHRB or any other types of Steam Generator
10. Power Cycle piping means Main Steam, Hot Reheat, Cold Reheat, HP Bypass
11. For the purpose of evaluation of the PQR, one MW shall be considered equivalent to 3.5TPH where ever rating of HRSG/BOILER is mentioned in MW. Similarly, where ever rating of Gas Turbine is mentioned in terms of Frame size, ISO rating in terms of MW shall be considered for evaluation.
12. In case the experience/PO/WO certificate enclosed by bidders do not have separate break up prices for the E&C portion of Electrical and CI Works, (i.e. the certificates enclosed are for composite order for supply and erection of Electrical & CI and other works if any), then value of Erection and Commissioning for the Electrical & CI portion shall be considered as 15% of the supply & erection of Electrical & CI, unless otherwise specifically indicated in the PQR.
13. Scope for capital overhaul of STG shall cover Bearing Inspection work and overhauling of all cylinders of the Turbine.
14. In case the tendered scope is not a Pulverised Fuel Boiler, experience of Oil/Gas Fired Boilers also can be considered.
15. Value of work is to be updated with indices for "All India Avg. Consumer Price index for industrial workers" and "Monthly Whole Sale Price Index for All Commodities" with base month as per last month of work execution and indexed up to three (3) months prior to the month of latest due date of bid submission as per following formula-

$$P = R + \frac{0.425 \times R \times (X_N - X_0)}{X_0} + \frac{0.425 \times R \times (Y_N - Y_0)}{Y_0}$$

Where

P = Updated value of work

R = Value of executed work

$X_N$  = All India Avg. Consumer Price index for industrial workers for three months prior to the month of latest due date of bid submission (e.g. If latest bid submission date is 02-Mar-17, then bid submission month shall be reckoned as March'17 and index for Dec'2016 shall be considered).

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$X_0$  = All India Avg. Consumer Price index for industrial workers for last month of work execution

$Y_N$  = Monthly Whole Sale Price Index for All Commodities for three months prior to the month of latest due date of bid submission (e.g. If latest bid submission date is 02-Mar-17, then bid submission month shall be reckoned as March'17 and index for Dec'2016 shall be considered).

$Y_0$  = Monthly Whole Sale Price Index for All Commodities for last month of work execution

16. PROFIT shall be PBT earned during any one year of last three financial years as mentioned in PQR.
17. For evaluation of PQR, the credentials of the Bidder alone, and not that of the Group Company shall be considered.
18. "Executed" means the bidder should have achieved the criteria specified in the PQR even if the Contract has not been completed or closed.
19. 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.

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फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : 23211691/ 23398000

**ANNEXURE - 2****FORMAT FOR NO DEVIATION CERTIFICATE**  
**(To be submitted in the bidder's letter head)**

BHARAT HEAVY ELECTRICALS LIMITED,  
Power Sector - Eastern Region,  
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,  
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	Receipt, Unloading, Storage, Dismantling, New Material Erection, Re-Erection of Old Items, Modification of existing Items, Restoration, Commissioning, Testing & PG Test of Combustion Modification System for NOx Mitigation of of U#5,6 & 7, STG-II (3X500MW) at NTPC - KAHALGAON STPS, Bihar	
Ref	1.0	Tender no PSER:SCT:KGN-S2009:19
	2.0	BHEL's NIT, vide reference no PSER:SCT:KGN-S2009:7766 Date: 10-01-2020.
	3.0	All other pertinent issues till date.

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted/uploaded offer/documents in accordance with tender instructions with acceptance of the terms & conditions of the tender by us and as per aforesaid references.

Thanking you,

Yours faithfully,

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

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**ANNEXURE - 3****FORMAT FOR SEEKING CLARIFICATION**

<b>JOB</b>	Receipt, Unloading, Storage, Dismantling, New Material Erection, Re-Erection of Old Items, Modification of existing Items, Restoration, Commissioning, Testing & PG Test of Combustion Modification System for NOx Mitigation of of U#5,6 & 7, STG-II (3X500MW) at NTPC -KAHALGAON STPS, Bihar
<b>TENDER NO</b>	PSER:SCT:KGN-S2009:19

Sl no	Reference clause of tender document	Existing provision	Bidder's query	BHEL's clarification

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**ANNEXURE - 4****CHECK LIST**

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

1	Name and Address of the Tenderer		
2	Details about type of the Firm/Company		
3.a	Details of Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
3.b	Details of alternate Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
4	EMD DETAILS	DD No: _____ Date : _____ Bank : _____ Amount: <u>Please tick ( √ ) whichever applicable:-</u> ONE TIME EMD / ONLY FOR THIS TENDER	
5	Validity of Offer	TO BE VALID FOR SIX MONTHS FROM DUE DATE	
		APPLICABILITY(BY BHEL)	ENCLOSED BY BIDDER
6	Whether the format for compliance with PRE QUALIFICATION CRITERIA (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format	Applicable	YES / NO
7	Audited profit and Loss Account for the last three years	Applicable/Not Applicable	YES/NO
8	Copy of PAN Card	Applicable/Not Applicable	YES/NO
9	Whether all pages of the Tender documents including annexures, appendices etc are read understood and signed	Applicable/Not Applicable	YES/NO
10	Integrity Pact	Applicable/Not Applicable	YES/NO
11	Declaration by Authorised Signatory	Applicable/Not Applicable	YES/NO
12	No Deviation Certificate	Applicable/Not Applicable	YES/NO
13	Declaration confirming knowledge about Site Conditions	Applicable/Not Applicable	YES/NO
14	Declaration for relation in BHEL	Applicable/Not Applicable	YES/NO
15	Non Disclosure Certificate	Applicable/Not Applicable	YES/NO
16	Bank Account Details for E-Payment	Applicable/Not Applicable	YES/NO
17	Capacity Evaluation of Bidder for current Tender	Applicable/Not Applicable	YES/NO
18	Tie Ups/Consortium Agreement are submitted as per format	Applicable/Not Applicable	YES/NO
19	Power of Attorney for Submission of Tender/Signing Contract Agreement	Applicable/Not Applicable	YES/NO
20	Analysis of Unit rates	Applicable/Not Applicable	YES/NO
21	Bankruptcy Code Proceedings (IBC) by NCLT or under Liquidation / BIFR (Undertaking to be enclosed if not applicable)	Applicable/Not Applicable	YES/NO

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

DATE :

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

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ANNEXURE-5CONDITIONS TO BE COMPLIED WITH FOR CONSORTIUM BIDDING (TECHNICAL TIE UP)

- 1 Prime Bidder and Consortium Partner or partners are required to enter into a consortium agreement with a validity period of six months initially. In case the consortium is awarded the contract, then the Consortium Agreement between the Prime Bidder and Consortium Partner or partners shall be extended till contractual completion period including extension periods if any applicable. The Prime Bidder and Consortium Partner(s) shall certify to BHEL regarding existence and validity of their consortium agreement on six monthly basis.
- 2 'Standalone' bidder cannot become a 'Prime Bidder' or a 'Consortium bidder' or 'Technical Tie up bidder' in a consortium (or Technical Tie up) bidding. Prime bidder shall neither be a consortium partner to other prime bidder nor take any other consortium partners. However, consortium partner may enter into consortium agreement with other prime bidders. In case of non compliance, consortium bids of such Prime bidders will be rejected.
- 3 Number of partners for a consortium Bidding (or Technical Tie up) shall be as specified in the PQR.
- 4 Prime Bidder shall be as specified in the Pre Qualification Requirement, else the bidder who has the major share of work.
- 5 In order to be qualified for the tender, Prime Bidder and Consortium partner or partners shall satisfy (i) the Technical 'Pre Qualifying Requirements' specified for the respective package, (ii) "Assessment of Capacity of Bidder" as specified in clause 8.0
- 6 Prime Bidder shall comply with additional 'Technical' criteria of PQR as defined in 'Explanatory Notes for the PQR'
- 7 Prime Bidder shall comply with all other Pre Qualifying criteria for the Tender unless otherwise specified
- 8 In case customer approval is required, then Prime Bidder and Consortium Partner or partners shall have to be individually approved by Customer for being considered for the tender.
- 9 Prime Bidder shall be responsible for the overall execution of the contract
- 10 In case of award of job, Performance shall be evaluated for Prime Bidder and Consortium Partner or partners for their respective scope of work(s) as per prescribed formats.
- 11 In case the Consortium partner or partners back out, their SDs shall be encashed by BHEL. In such a case, other consortium partner or partners meeting the PQR have to be engaged by the Prime Bidder, and if not, the respective work will be withdrawn and executed on risk and cost basis of the Prime Bidder. The new consortium partner or partners shall submit fresh SDs as applicable.
- 12 In case the prime Bidder withdraws, the whole contract shall be considered cancelled and short closed.
- 13 After successful execution of one work with a consortium partner under direct orders of BHEL, the Prime Bidder shall be eligible for becoming a 'standalone' bidder for works similar to that for which consortium partner was engaged, for subsequent tenders.
- 14 The consortium partner shall submit SD equivalent to 1% of the total contract value in addition to the SD to be submitted by the prime Bidder for the total contract value. In case there are two consortium partners, then each partner shall submit SD equivalent to 0.5% of the total contract value in addition to the SD to be submitted by the prime Bidder for the total contract value.
- 15 In case of a Technical Tie up, all the clauses applicable for the Consortium partner shall be applicable for the Technical Tie up partner also.

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Amendment to GCC/SCC

Annexure - A

1. Introduction of Clause No 1.15.13 in GCC as below:

Clause No 1.15.13: Additional security deposit (SD) has to be submitted by the successful bidder with value as follows:

"If the final price of successful bidder is lesser by 'more than 20%' of BHEL's estimate - 'Additional Security Deposit' will be required to be submitted by the successful bidder with value as follows:

Additional Security Deposit = 30 % of (A-B) limited to a maximum of 10% of the 'Total Price/Contract Value', where,

A = 80% of BHEL estimate

B = The final offered price of successful bidder through RA (In case of RA)

OR

Sealed paper price bid of successful bidder (in case of paper bid)

This 'Additional Security Deposit' shall have the same validity as that of the 'Security Deposit' and shall be revalidated/released in the manner as spelt out for the 'Security Deposit' as per relevant clause of GCC.

The BHEL's estimated value shall be disclosed to the successful bidder (on their request) at appropriate juncture in case 'Additional Security Deposit' is applicable."

2. Clause no. 1.9.1(ii) of GCC shall be read as below:

The EMD may be accepted only in the following forms:

(a) Cash deposit as permissible under the extant Income Tax Act (before tender opening)

(b) Electronic Fund Transfer credited in BHEL account (before tender opening)

(c) Banker's cheque/ Pay order/ Demand draft, in favour of BHEL (along with offer)

(d) Fixed Deposit Receipt (FDR) issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL).

In addition to above, the EMD amount in excess of Rs. 2 Lakh may also be accepted in the form of Bank Guarantee from scheduled bank. The Bank Guarantee in such cases shall be valid for atleast six months. EMD of successful tenderer will be retained as part of Security Deposit.

Clause no. 1.9.1(iv) & (v) of GCC stands deleted.

3. Clause no. 1.10.1 of GCC shall be read as below:

The total amount of Security Deposit will be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.

4. Clause no. 1.10.2 of GCC shall be read as below:

At least 50% of the required Security Deposit, including the EMD, should be furnished before start of the work. Balance of the Security Deposit can be deposited by deducting 10% of the gross amount progressively from each of the running bills of the Contractor till the total amount of the required Security Deposit is collected.

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The recoveries made from running bills (cash deduction towards balance SD amount) can be released against submission of equivalent Bank Guarantee in acceptable form, but only once, before completion of work, with the approval of competent authorities.

5. Clause no. 1.10.3 of GCC shall be read as below:

The balance amount to make up the required Security Deposit of 5% of the contract value may be accepted in the following forms:

- a) Cash (as permissible under the extant Income Tax Act)
- b) Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL
- c) Bank Guarantee from Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL
- d) Fixed Deposit Receipt issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL)
- e) Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL)

(Note: BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith)

6. Introduction of Clause No. 1.10.8 in GCC as below:

Clause No 1.10.8: SDBG to be furnished by the vendor before start of work. No payment will be released till SDBG is submitted by the vendor.

If requested by the vendor, cash recovery equivalent to SDBG value to be made from bills submitted by the vendor.

Also recovery of interest calculated @SBI PLR +2% on amount equivalent to SDBG / PBG value to be made for the gap period (difference between date of start of work and date of submission of BG / cash recovery).

In case of delay in extension of SDBG, in case of validity expiry, SDBG shall be invoked. However if the vendor submits a new BG after invocation of the previous BG then, it shall be refunded and recovery for the gap period, i.e. the duration for which BG is not available shall be made as stated above.

7. Clause no. 1.11 of GCC shall be read as below:

Security Deposit shall be refunded/Bank Guarantee(s) released to the Contractor along with the 'Final Bill' after deducting all expenses / other amounts due to BHEL under the contract / other contracts entered into with them by BHEL upon fulfilment of contractual obligations as per terms of the contract.

8. Clause no. 2.8.3, 2.8.4 and 2.8.5 of GCC shall be read as below:

Clause no. 2.8.3: The contractor shall comply with all applicable State and Central Laws, Statutory Rules, Regulations, Notifications, etc. such as Payment of Wages Act, Minimum Wages Act, Workmen Compensation Act, Employer's Liability Act, Industrial Disputes Act, Employers Provident Act, Employees State Insurance Scheme, Contract Labour (Regulation and Abolition) Act, 1970, Payment of Bonus & Gratuity Act, Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996, The Building and Other Construction Workers' Welfare Cess Act, 1996 and other Acts, Rules, and Regulations for labour/workers as applicable and as may be enacted by the State Government and Central Govt. during the tenure of the Contract and having force or jurisdiction at Site. The Contractor shall also comply with provisions of and give all such notices to the local Governing Body, Police and other relevant Authorities as may be required by the Law.

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Clause no. 2.8.4: The Contractor shall obtain independent License under the Contract Labour (Regulations and Abolition) Act, 1970 for engaging contract labour as required from the concerned Authorities based on the certificate (Form- V) issued by the Principal Employer/Customer.

Clause no. 2.8.5: The contractor shall pay and bear all taxes, fees, license charges, Cess, duties, deposits, tolls, royalties, commission or other charges which may be leviable on account of his operations in executing the contract.

#### 9. Clause 2.12 of GCC (Overrun Compensation)

##### 2.12 OVERRUN COMPENSATION (ORC)

2.12.1 ORC during original contract period: No ORC shall be applicable during the original contract period.

2.12.2 ORC during extended period for the reasons solely attributable to contractor: No ORC shall be applicable during the extended period granted for the reasons solely attributable to contractor and work executed during this period shall be paid as per original contract rates.

2.12.3 ORC during extended period for the reasons not attributable to contractor: ORC shall be payable as per following procedure:

2.12.3.1 For initial period of twelve months of extended period, ORC rate applicable over executed value shall be 5%. For every subsequent period of twelve months, ORC rate shall be further increased by 5% over the previous rate. For example, ORC rates applicable for initial period of 12 months and subsequent period of 12 months are given below.

Sl. No.	Extended Period for the reasons attributable to BHEL	ORC rate applicable over executed value
1	First 12 months	5%
2	13th-24th month and so on	10.25% $\{[(1.05 \times 1.05)-1] \times 100\}$

This process of increasing ORC rate for each subsequent period of 12 months shall continue till applicability of ORC.

2.12.3.2 On completion of original contract period as well as on completion of each subsequent period of twelve months i.e. at the time of change in applicable ORC rate, Delay Analysis shall be carried out and percentage shortfall attributable to both BHEL & Contractor shall be calculated.

2.12.3.3 For the purpose of calculation of ORC, executed value of work in the month shall be divided in Part-1 and Part-2 in proportion of percentage shortfall attributable to BHEL and contractor respectively, based on the last delay analysis as worked out in 2.12.3.2.

ORC shall be payable only on Part-1 and no ORC shall be payable on Part-2.

Value of Part-1 shall be further limited to the value of actual inputs provided by BHEL i.e. "Plan - Shortfall attributable to BHEL" for the month, as per Form-14 for calculation of ORC.

2.12.3.4 Payment of ORC amount shall be further regulated as follows:

(i) 50% of the ORC is allocated for deployment of matching resources (with weightages) agreed as per the joint programme drawn vide 2.11.4. ORC Payment against resources shall be calculated in proportion to percentage of resources actually deployed w.r.t. planned resources, as per Form-14.

(ii) 50% of ORC is allocated for achieving of planned progress agreed as per the joint programme drawn vide 2.11.4. ORC Payment shall be reduced in proportion to percentage

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shortfall attributable to contractor w.r.t. "Plan - Shortfall attributable to BHEL" for the month, as per Form-14.

2.12.3.5 The maximum amount of ORC payable for the month shall be limited to Rs. 5,00,000/-.

2.12.3.6 In case, there is no shortfall attributable to contractor for the month and also contractor has deployed the resources as agreed in Form-14 but ORC amount payable for the month worked out as per procedure mentioned in clause 2.12.3.3, 2.12.3.4 and 2.12.3.5, is less than Rs.1,00,000/-, then ORC amount payable for the month shall be Rs.1,00,000/- otherwise ORC amount payable for the month shall remain same.

2.12.3.7 In case execution is on HOLD (Other than Force Majeure), ORC shall be payable as per following:

- i). Contractor has not been permitted by BHEL to de-mobilize
  - a) ORC amount of Rs. 1,00,000/- per month shall be applicable during the period of HOLD provided resources as planned are deployed (not demobilised) during the period of hold.
  - b) Subsequent to lifting of HOLD, Period of HOLD shall not be excluded in calculation of period for deciding applicable ORC rate as per clause 2.12.3.1.
- ii). Contractor has been permitted to demobilize and to remobilize after lifting of HOLD
  - a) No ORC shall be payable to contractor for the period of HOLD.
  - b) Subsequent to lifting of HOLD, Period of HOLD shall not be excluded in calculation of period for deciding applicable ORC rate as per clause 2.12.3.1.

2.12.3.8 In case Force Majeure is invoked:

- (i) No ORC shall be applicable during the period of Force Majeure.
- (ii) Subsequent to revocation of Force Majeure, period of Force Majeure shall be excluded in calculation of period for deciding applicable ORC rate as per clause 2.12.3.1.

2.12.4 Applicability of ORC: ORC shall not be applicable for following activities.

- (i) Area cleaning, removal of temporary structures and return of scrap.
- (ii) Punch list points / pending points liquidation pending due to reasons attributable to contractor
- (iii) Submission of "As built Drawing"
- (iv) Material Reconciliation
- (v) Completion of Contract Closure formalities like HR Clearance/ No dues from various dept./ Statutory Authorities etc.

2.12.5 Total Over Run Compensation shall be limited to 10% of the cumulatively executed contract value till the month (excluding Taxes and Duties if payable extra). For this purpose, executed contract value excludes PVC, ORC and Extra/Supplementary Works.

#### 10. Clause 2.14 of GCC (Quantity Variation)

a) Existing Clause 2.14.1 of GCC stands revised as follows:

"The quantities given in the contract are tentative and may change to any extent (both in plus side and minus side). The quoted rates for individual items shall remain firm irrespective of any variations in the individual quantities. No compensation becomes payable in case the variation of the final executed contract value is within the limit of Minus (-) 15% of awarded contract value"

b) Existing Clause 2.14.2 ii). of GCC stands revised as follows:

"In case the finally executed contract value increases above the awarded Contract Value due to quantity variation, there will be no upward revision in the rates for the individual items and also contractor is not eligible for any compensation."

11. Clause 2.17 of GCC (Price Variation Compensation) stands revised as follows:

## 2.17 PRICE VARIATION COMPENSATION

2.17.1 In order to take care of variation in cost of execution of work on either side, due to variation in the index of LABOUR, HIGH SPEED DIESEL OIL, WELDING ROD, CEMENT, STEEL, MATERIALS, Price Variation Formula as described herein shall be applicable (only for works executed during extended period, if any, subject to other conditions as described in this section)

2.17.2 85% component of Contract Value shall be considered for PVC calculations and remaining 15% shall be treated as fixed component. The basis for calculation of price variation in each category, their component, Base Index shall be as under:

SL NO	CATEGORY	BASE INDEX	PERCENTAGE COMPONENT ('K')				
			CIVIL PACKAGES (See Note AB/C)			MECHANICAL PACKAGES	Electrical, C&I Material Management/Handling and other labour oriented packages
			A	B	C		
i)	LABOUR (ALL CATEGORIES)	'MONTHLY ALL-INDIA AVERAGE CONSUMER PRICE INDEX NUMBERS FOR INDUSTRIAL WORKERS' published by Labour Bureau, Ministry of Labour and Employment, Government of India. (Website: <a href="http://labourbureau.nic.in">labourbureau.nic.in</a> )	40	25	30	65	80
ii)	HIGH SPEED DIESEL OIL	Name of Commodity: HSD Commodity Code: 1202000005 (See Note E)	5	3	5	5	5
iii)	WELDING ROD	Name of Commodity: MANUFACTURE OF BASIC METALS Commodity Code: 1314000000 (See Note E)				15	
iv)	CEMENT	Name of Commodity: ORDINARY PORTLAND CEMENT Commodity Code: 1313050003 (See Note E)		20	30		
v)	STEEL (Structural and Reinforcement Steel)	Name of Commodity: MILD STEEL: LONG PRODUCTS Commodity Code: 1314040000 (See Note E)		25			
vi)	All OTHER MATERIALS (Other than Cement & Steel)	Name of Commodity: ALL COMMODITIES Commodity Code: 1000000000 (See Note E)	40	12	20		

Note: A) Cement & Steel:Free Issue (BHEL Scope)  
 B) Cement & Steel :In Contractor Scope  
 C) Cement in Contractor Scope, and Steel is Free Issue (BHEL Scope)  
 D) For Composite packages (i.e. Civil+Mechanical+Electrical and/or CI or Civil+Mechanical or Mechanical+Electrical and/or CI}, the COMPONENT ('K') for various categories shall be as per respective packages as above.  
 E) As per the 'MONTHLY WHOLE SALE PRICE INDEX' for the respective Commodity and Type, published by Office of Economic Adviser, Ministry of Commerce and Industry, Government of India. (Website: <http://eaindustry.nic.in/home.asp>). Revisions in the index or commodity will be re adjusted accordingly.

2.17.3 #

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2.17.4 Payment/recovery due to variation in index shall be determined on the basis of the following notional formula in respect of the identified COMPONENT ('K') viz LABOUR, HIGH SPEED DIESEL OIL, WELDING ROD, CEMENT, STEEL, MATERIALS.

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

Where

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

K = Percentage COMPONENT ('K') applicable for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials

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

X<sub>N</sub> = Revised Index for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials for the billing month under consideration

X<sub>0</sub> = Index for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials as on the Base date

2.17.5 Base date shall be the calendar month of the schedule completion date (i.e. Actual start date+ Scheduled Contractual completion period as per Letter of Intent/award and/or work order).

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

However, PVC will be payable for items executed under quantity variation of BOQ items under originally awarded contract.

2.17.7 The contractor shall furnish necessary monthly bulletins in support of the requisite indices from the relevant websites along with his Bills.

2.17.8 The contractor will be required to raise the bills for price variation payments on a monthly basis along with the running bills irrespective of the fact whether any increase/decrease in the index for relevant categories has taken place or not. In case there is delay in publication of bulletins (final figure), the provisional values as published can be considered for payments and arrears shall be paid/recovered on getting the final values.

2.17.9 PVC shall be applicable only, during the extended period of contract (if any) after the scheduled completion period and for the portion of work delayed / backlog for the reasons not attributable to the Contractor.

However total quantum of Price Variation amount payable/recoverable shall be regulated as follows:

i. For the portion of shortfall / backlog not attributable to contractor, PVC shall be worked out on the basis of indices applicable for the respective month in which work is done. Base index shall be applicable as defined in clause 2.17.5

ii. In case of Force majeure, PVC shall be regulated as per (a) or (b) below:

a) Force majeure is invoked before "base date"/ "revised base date" (as explained below) OR immediately after "base date"/ "revised base date" in continuation (i.e. during the period when PVC is not applicable):

1. Base date shall be revised: Revised base date =Previous base date+ duration of Force majeure.  
No PVC will be applicable for the work done till revised base date.

2. PVC will be applicable for the work done after "base date"/ "revised base date" as the case may be (during extended period when delay is not attributable to contractor). PVC shall be worked out on the basis of indices applicable for the respective month in which work is done with base index as on "base date"/"revised base date" as the case may be.

b) Force majeure is invoked after "base date"/ "revised base date" as the case may be (during extended period when delay is not attributable to contractor) -

1. PVC shall be applicable for the work done after revocation of force majeure.

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2. PVC for the work done after revocation of force majeure shall be worked out on the basis of indices applicable for the respective month in which work is done excluding the effect of change in indices during total period of Force majeure(s) invoked after "base date"/ "revised base date" as the case may be. Base index shall be taken as on "base date"/ "revised base date" as the case may be.

iii. The total amount of PVC shall not exceed 15% of the cumulatively executed contract value. Executed contract value for this purpose is exclusive of PVC, ORC, Supplementary/Additional Items and Extra works except extra items due to quantity variation.

12. Clause 2.2 of GCC (Law governing the contract and court jurisdiction) stands revised as follows:

"The contract shall be governed by the Law for the time being in force in the Republic of India. Subject to Clause 2.21.1 or 2.21.2 of this Contract, the Civil Court having original Civil Jurisdiction at Delhi for PSNR, at Kolkata for PSER, at Nagpur for PSWR and at Chennai for PSSR, shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract."

13. Existing Clause 2.21 "ARBITRATION" of GCC has been amended as follows:

## 2.21 ARBITRATION & CONCILIATION

### 2.21.1 ARBITRATION:

2.21.1.1 Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 2.21.2 herein below or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, commence arbitration in respect of such Dispute by issuance of a notice in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice'). The Notice shall contain the particulars of all claims to be referred to arbitration in sufficient detail and shall also indicate the monetary amount of such claim. The arbitration shall be conducted by a sole arbitrator to be appointed by the Head of the BHEL Power Sector Region issuing the Contract within 60 days of receipt of the complete Notice. The language of arbitration shall be English.

The Arbitrator shall pass a reasoned award.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder as in force from time to time shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Kolkata (the place from where the contract is Issued). The Contract shall be governed by and be construed as per provisions of the laws of India. Subject to this provision 2.21.1.1 regarding ARBITRATION, the principal civil court exercising ordinary civil jurisdiction over the area where the seat of arbitration is located shall have exclusive jurisdiction over any DISPUTE to the exclusion of any other court.

2.21.1.2 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018 as amended from time to time.

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2.21.1.3 The cost of arbitration shall initially be borne equally by the Parties subject to the final allocation thereof as per the award/order passed by the Arbitrator.

2.21.1.4 Notwithstanding the existence of any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner unless the dispute inter-alia relates to cancellation, termination or short-closure of the Contract by BHEL.

#### 2.21.2 CONCILIATION:

If at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee (IEC) to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

Notes:

1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.
2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure 2.3 to this GCC. The Procedure 2.3 together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this GCC.

The Contractor hereby agrees that BHEL may make any amendments or modifications to the provisions stipulated in the Procedure 2.3 to this GCC from time to time and confirms that it shall be bound by such amended or modified provisions of the Procedure 2.3 with effect from the date as intimated by BHEL to it.

#### 2.21.3 No Interest payable to Contractor

Notwithstanding anything to the contrary contained in any other document comprising in the Contract, no interest shall be payable by BHEL to Contractor on any moneys or balances including but not limited to the Security Deposit, EMD, Retention Money, RA Bills or the Final Bill, or any amount withheld and/or appropriated by BHEL etc., which becomes or as the case may be, is adjudged to be due from BHEL to Contractor whether under the Contract or otherwise.

#### 14. Clause no. 2.7.2 and 2.7.3 of Volume-IB-GCC shall be revised as follows:

2.7.2.1 To terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor after notice of a period of 14 days by BHEL in any of the following cases:

- i). Contractor's poor progress of the work vis-à-vis execution timeline as stipulated in the Contract, backlog attributable to contractor including unexecuted portion of work does not appear to be executable within balance available period considering its performance of execution.
- ii). Withdrawal from or abandonment of the work by contractor before completion of the work as per contract.
- iii). Non-completion of work by the Contractor within scheduled completion period as per Contract or as extended from time to time, for the reasons attributable to the contractor.

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- iv). Termination of Contract on account of any other reason (s) attributable to Contractor.
- v). Assignment, transfer, subletting of Contract without BHEL's written permission.
- vi). Non-compliance to any contractual condition or any other default attributable to Contractor.

#### Risk & Cost Amount against Balance Work:

Risk & Cost amount against balance work shall be calculated as follows: Risk & Cost Amount=  $[(A-B) + (A \times H/100)]$

Where,

A= Value of Balance scope of Work (\*) as per rates of new contract

B= Value of Balance scope of Work (\*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

\* Balance scope of work (in case of termination of contract):

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount. Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose. Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: Incase portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

#### LD against delay in executed work in case of Termination of Contract:

LD against delay in executed work shall be calculated in line with LD clause no. 2.7.9 of GCC, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of "LD against delay in executed work in case of termination of contract" is given below.

- i). Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii) Let the value of executed work till the time of termination of contract= X
- iii) Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv) Delay in executed work attributable to contractor i.e.  $T2=[1-(X/Y)] \times T1$
- v) LD shall be calculated in line with LD clause (clause 2.7.9) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.

2.7.2.2 In case Contractor fails to deploy the resources as per requirement, BHEL can deploy own/hired/otherwise arranged resources at the risk and cost of the contractor and recover the expenses incurred from the dues payable to contractor. Recoveries shall be actual expenses incurred plus 5% overheads or as defined in TCC.

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### **2.7.3 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor**

Following sequence shall be applicable for recoveries from contractor:

- a) Dues available in the form of Bills payable to contractor, SD, BGs against the same contract.
- b) Demand notice for deposit of balance recovery amount shall be sent to contractor, if funds are insufficient to effect complete recovery against dues indicated in (a) above.
- c) If contractor fails to deposit the balance amount to be recovered within the period as prescribed in demand notice, following action shall be taken for balance recovery:
  - i) Dues payable to contractor against other contracts in the same Region shall be considered for recovery.
  - ii) If recovery cannot be made out of dues payable to the contractor as above, balance amount to be recovered, shall be informed to other Regions/Units for making recovery from the Unpaid Bills/Running Bills/SD/BGs/Final Bills of contractor.
  - iii) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.

### **15. Clause 2.24 of GCC (Performance Guarantee for Workmanship)**

Term "Special Conditions of Contract" appearing in 3<sup>rd</sup>line of the current clause 2.24.1, is replaced by "Technical Conditions of Contract"

### **16. Clause 4.2.1.7 of Special Condition of Contract (SCC)**

At the end of Clause 4.2.1.7 (i.e. after the line "Decision of BHEL shall be final and binding on the contractor") following para is to be added

"It is not obligatory on the part of BHEL to provide any tools and tackles or other materials other than those specifically agreed to do so by BHEL. However, depending upon the availability, BHEL /BHEL's Customer handling equipment and other plants may be made available to the contractor on payment of hire charges as fixed, subject to the conditions laid down by BHEL/Customer from time to time. Unless paid in advance, such hire charges, if applicable, shall be recovered from contractor's bill / security deposit or any other due payment in one installment."

### **17. Clause 9.61 of SCC (NON-COMPLIANCE)**

Under NON-COMPLIANCE, at the end of Clause 9.61 (i.e. after the line "Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.") following para is to be added:

"In case of any financial deduction made by Customer for lapses of safety other than what is provided above or elsewhere in the contract, the same shall be charged on back-to-back basis on the defaulting contractor without prejudice to any other right spelt anywhere in the tender / contract"

### **18. Clause 2.15 of GCC (EXTRA WORKS)**

Existing Clause 2.15.5 of GCC stands revised as follows:

"After eligibility of extra works is established and finally accepted by BHEL engineer/designer, payment will be released on competent authority's approval at the following rate.

**MAN-HOUR RATE FOR ELIGIBLE EXTRA WORKS:** Single composite average labour man-hour rate, including overtime if any, supervision, use of tools and tackles and other site expenses and incidentals, consumables for carrying out any major rework/ repairs/ rectification/ modification/ fabrication as certified

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by site as may arise during the course of erection, testing, commissioning or extra works arising out of transit, storage and erection damages, payment, if found due will be at Rs 108/- per man hour."

19. Clause 9.1 & 9.2 to 9.62 of SCC (HSE & OHSAS Obligations)

Cl. no. 9.0	No change
Cl. no. 9.1	HSE (Health, safety & Environment): Contractor will comply with HSE (Health, safety & Environment) requirements of BHEL as per "HSE Plan for Site Operations by Sub-contractors" (Document no. HSEP:14, Rev.00) attached with this tender.
Cl. no. 9.2 to 9.62	Deleted

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Annexure -BTerms & Conditions of Reverse Auction

Against this enquiry for the subject item/ system with detailed scope of supply/service as per tender specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit "online sealed bid" in the Reverse Auction. Non-submission of "online sealed bid" by the bidder for any of the eligible items for which techno- commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
3. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
4. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained for participation in the reverse auction.
5. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
6. Bidders have to fax the Compliance form (annexure III) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
7. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" which is inclusive of all cost elements in line with terms & conditions of the tender for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
8. Reverse auction will be conducted on scheduled date & time.
9. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
10. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (Annexure IV) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice.
12. Bidders shall be required to read the "Terms and Conditions" section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the "Business Rules of Reverse Auction", which will be communicated before the Reverse Auction.
13. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action *as per extant BHEL guidelines*, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
14. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
15. In case BHEL decides to go for reverse auction, the H1 bidder (whose quote is highest in online sealed bid) will not be allowed to participate in further RA process provided minimum three bidders are left after removal of H1 bidder. In case of tie for H1 bid (identical online sealed bids), 15 minutes' additional time shall be provided and all the participating bidders shall be informed by mail/message on bidding screen to enable bidders submit revised online sealed bids so as to break the tie.

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**Annexure -C****Certificate by Chartered Accountant on letter head**

This is to Certify that M/S .....  
 (hereinafter referred to as 'company') having its registered office at .....  
 ..... is registered under MSMED Act 2006, (Entrepreneur Memorandum No (Part-II) ..... dtd:....., Category:..... (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the latest audited financial year ..... as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006 :  
 Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:  
 Rs.....Lacs

**(Strike off whichever is not applicable)**

The above investment of Rs.....Lacs is within permissible limit of Rs.....Lacs for .....Micro / Small (Strike off which is not applicable) Category under MSMED Act 2006.

Or

The company has been graduated from its original category {Micro/ Small} (Strike off which is not applicable) and the date of graduation of such enterprise from its original category is .....(dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such enterprise from its original category as notified vide S.O. No. 3322(E) dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name-

Membership number-

Seal of Chartered Accountant

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**Annexure –D****Specific Clause w.r.t. BOCW Act & Cess Act**

1. It shall be the sole responsibility of the contractor as employer to ensure compliance of all the statutory obligations under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.
2. It shall be sole responsibility of the contractor engaging Building Workers in connection with the building or other construction works in the capacity of employer to apply and obtain registration certificate specifying the scope of work under the relevant provisions of the Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 from the appropriate Authorities.
3. It shall be responsibility of the contractor to furnish a copy of such Registration Certificate within a period of one month from the date of commencement of Work.
4. It is responsibility of the contractor to register under the Building and other Construction Workers' Welfare Cess Act, 1996 and deposit the required Cess for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 at such rate as the Central Government may, by notification in the Official Gazette, from time to time specify. However, before registering and deposit of Cess under the Building and other Construction Workers' Welfare Cess Act, 1996, the contractor will seek written prior approval from the Construction Manager.
5. In case where the contractor has been accorded written approval by the Construction Manager and the contractor is required to furnish information in Form I and deposit the Cess under the Building and other Construction Workers' Welfare Cess Act, 1996, fails to do so, BHEL reserves right to impose penalty at the rate of 30% of Cess Amount.
6. It shall be sole responsibility of the contractor as employer to get registered every Building Worker, who is between the age of 18 to 60 years of age and who has been engaged in any building or other construction work for not less than ninety days during the preceding twelve months as Beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996.
7. It shall be sole responsibility of the contractor as employer to maintain all the registers, records, notices and submit returns under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.
8. It shall be sole responsibility of the contractor as employer to provide notice of poisoning or occupation notifiable diseases, to report of accident and dangerous occurrences to the concerned authorities under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the rules made thereunder and to make payment of all statutory payments & compensation under the Employees' Compensation Act, 1923.
9. It shall be responsibility of the Contractor to furnish BHEL on monthly basis, Receipts/ Challans towards Deposit of the Cess under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder along with following statistics :
  - (i) Number of Building Workers employed during preceding one month.
  - (ii) Number of Building workers registered as Beneficiary during preceding one month.
  - (iii) Disbursement of Wages made to the Building Workers for preceding wage month.
  - (iv) Remittance of Contribution of Beneficiaries made during the preceding month
10. BHEL shall reimburse the contractor the Cess amount deposited for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder. However, BHEL shall not reimburse the Fee paid towards the registration of establishment, fees paid towards registration of Beneficiaries and Contribution of Beneficiaries remitted.
11. It shall be responsibility of the Building Worker engaged by the Contractor and registered as a beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 to contribute to the Fund at such rate per mensem as may be specified by the State government

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by notification in the Official Gazette. Where such beneficiary authorizes the contractor being his employer to deduct his contribution from his monthly wages and to remit the same, the contractor shall remit such contribution to the Building and other construction Workers' Welfare Board in such manner as may be directed by the Board , within the fifteen days from such deduction.

12. If any point of time during the contract period, non-compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder is observed, BHEL reserves the right to withhold a reasonable amount from the payables to discharge any obligations on behalf of Contractors. The reasonable amount shall be decided by the Construction Manager in consultation with Resident Accounts Officer & Head HR and shall be final.
13. The contractor shall declare to undertake any liability or claim arising out of employment of building workers and shall indemnify BHEL from all consequences / liabilities / penalties in case of non compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.

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ANNEXURE-EStatewise GST Registration nos.

Sl. No.	State / UT	GST Reg. No.
1	Andhra Pradesh	37AAACB4146P7Z8
2	Assam	18AAACB4146P1ZE
3	Bihar	10AAACB4146P1ZU
4	Chandigarh	04AAACB4146P1ZN
5	Chattishgarh	22AAACB4146P1ZP
6	Daman & Diu	25AAACB4146P1ZJ
7	Delhi	07AAACB4146P1ZH
8	Gujarat	24AAACB4146P1ZL
9	Haryana	06AAACB4146P1ZJ
10	HP	02AAACB4146P1ZR
11	Jharkhand	20AAACB4146P5ZP
12	Karnataka	29AAACB4146P1ZB
13	Kerala	32AAACB4146P1ZO
14	Maharashtra	27AAACB4146P1ZF
15	MP	23AAACB4146P1ZN
16	Punjab	03AAACB4146P2ZO
17	Rajasthan	08AAACB4146P1ZF
18	Tamil Nadu	33AAACB4146P2ZL
19	Telangana	36AAACB4146P1ZG
20	Tripura	16AAACB4146P1ZI
21	UP	09AAACB4146P2ZC
22	Uttarakhand	05AAACB4146P1ZL
23	West Bengal	19AAACB4146P1ZC
24	Mizoram	15AAACB4146P1ZK
25	Orissa	21AAACB4146P1ZR
26	Arunachal Pradesh	12AAACB4146P1ZQ

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**Annexure- CPP-GST/I****Please arrange to submit this filled-up format along with Tender**

Name of the Company	
Address of Company*	
Company Registration Number*	
Name of Partners / Directors	
ALL THE STATES WHERE BIDDER HAS A PLACE OF BUSINESS*	
ALL ADDRESS OF VENDOR MENTIONING THEIR PIN AS PER THE LATEST GST REGISTRATION*	
GSTN OF ALL THE ABOVE NOTED PLACES OF VENDOR*	
Bidder Type: Indian/ Foreign*	
City*	
State*	
Country*	
Postal Code*	
PAN/TAN Number*	
Company's Establishment Year	
Company's Nature of Business*	
Company's Legal Status* {limited /undertaking/joint venture/partnership/other}	
Company Category* {micro unit as per MSME/small unit as per MSME/medium unit as per MSME/ UAN as per Udyog Aadhaar Memorandum/ Ancillary unit/project affected person of this company/ssi/ other}	
Relevant documents to be submitted as applicable.	
Enter Company's Contact Person Details	
Title(Mr. / Mrs. / Ms. / Dr. / Shri)*	
Contact Name*	
Date Of Birth*	
Correspondence Email*	
(Correspondence Email ID can be same as your Login ID. All the mail correspondence will be sent only to the Correspondence Email ID.)	
Designation	
Phone*	
Fax*	
Mobile*	

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

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These special conditions shall be construed as part of tender document and shall be read along with general conditions of contract (GCC) and other volumes of tender. In case of any conflict or inconsistency between GCC, other volumes and these Technical conditions contract (TCC), the same shall be brought out by the bidder in writing to BHEL for clarification with stipulated date & before due date of submission of offer, failing which most stringent interpretation/ clause in favour of BHEL shall be adopted and the same shall be binding to the bidder.

CL. NO	DESCRIPTION
1.0	<b>PROJECT SYNOPSIS AND GENERAL INFORMATION</b> <p>Name of the Owner : NTPC LTD</p> <p>Address : KAHALGAON SUPER THERMAL POWER STATION STAGE-II (3X500 MW),NTPC Ltd., District-Bhagalpur, Bihar, India</p> <p>Nearest Railway Station : Kahalgaon Railway Station is situated about 7km from the plant site.</p> <p>Nearest Road : The Bhagalpur-Sahibganj State Highway runs parallel to the railway track. Bhagalpur, the nearest major Town, is about 30-km southwest of project site.</p> <p>Nearest Airport : The nearest airport is at Patna which is about 255 Km from site</p>
2.0	<b>SITE VISIT</b> <p>The bidder should visit project site and acquire full knowledge &amp; information about the conditions prevailing at site and in &amp; around the plant premises, together with all statutory, obligatory, mandatory requirements of various authorities before submission of offer. In line with the above, site visit confirmation will be required to be submitted by the bidder with the technical bid.</p>
3.0	<b>NAME OF WORK</b> <p>Receipt, unloading, storage, Dismantling, New Material Erection, Re-Erection of Old Items, Modification of existing Items, Restoration, Commissioning, Testing &amp; PG Test of Combustion modification system for NOx mitigation of U#5,6 &amp; 7, STG-II (3X500MW) at NTPC -KAHALGAON STPS</p>

4.0	SCOPE OF WORK
4.1	BROAD DETAILS
4.1.1	<p>The job includes modification at all three Units of Stage-II (3x500MW) at NTPC-KAHALGAON STPS in the Burner fuel nozzles (coal / oil/ air/ cc-ofa), Laying of duct from Windbox to BOFA Panels (above burners) &amp; its control instrumentation work. Modification in floors to carry out aforesaid work. Detailed scope is mentioned below, however it may be noted that below mentioned scope of work is only a guide line if any additional work which is not written below and required for carrying out for completion of work is to be done without any additional extra cost.</p>
4.1.2	<p>Bidders are strongly advised to inspect the site, examine and obtain all information required and satisfy himself regarding all matters. The price quoted by the bidder shall be based on his knowledge and judgement of the conditions and hazards involved. Ignorance of site conditions shall not be accepted as basis for any claim for compensation or will not be considered a reason under force majeure. This is a major and skilled job, it requires precision and timely preparation before the start of job. contractor is advised to completely mobilize the site at-least 01 month before official date of shutdown for pre shutdown jobs like Planning of job, fabrication of ducts, dismantling / erection of structural floors, arrangements f T&amp;P, gate pass preparation, fixing of winch and chain pulley blocks, removal of fouling structure etc.</p>
4.1.3	<p><b><u>MECHANICAL ITEMS</u></b></p> <p>a) Modification of Wind Box with BOFA panel.</p> <ul style="list-style-type: none"> <li>• New/ modified Re-designed Wind box including new coal, oil and air nozzle tips for all four corners.</li> <li>• New /Re-designed Tilting Tangential Burner Assembly.</li> <li>• Burner Tilt Power cylinders (based on the assessment of actual condition vendor may reuse the existing items also</li> <li>• Modification in coal piping, coupling &amp; its supports.</li> <li>• Strengthening/ modification of structure as required for carrying out combustion modification job (if required)</li> <li>• Burner Panel matching with frames (water wall panel for fitting new redesigned tangential tilting burner assemblies and windbox).</li> <li>• BOFA panel matching with frames (water wall panels for fitting in the new BOFA compartments).</li> <li>• SADC Pneumatic actuators with Positioners &amp; Position transmitters.</li> <li>• BOFA Compartment with dampers and power operated actuators.</li> <li>• Wind box connecting duct along with Expansion bellows between wind box connecting duct and wind box.</li> <li>• Instrumentation Air piping for all pneumatic actuators and instruments being replaced, refurbished under this package.</li> </ul> <p>b) Dismantling/Modification of existing Wind box assembly, Platforms/floors/stairirs, Ducts, Pr Parts, coal burner, Coal nozzle tip, coal piping, hangers etc.</p> <p>c) Preservation of Scanners and HEA Ignites and critical equipment which can be reused again shall be cleaned and stored in proper shed and shall be reused/ re erected/restored.</p> <p>d) Necessary access, platforms, walkways, handrails, staircase, ladders and gratings etc. for proper approach shall be made by vendor for all equipments, instruments (for newly added items as per scope of supply of Combustion modification) including required during commissioning and testing and accessories.</p> <p>e) Necessary handling/lifting arrangement with monorail and hoist alongwith suitable platform &amp; approach</p> <p>f) Insulation and Cladding.</p> <p>g) Repair / replacement/modification of water wall tubes for installation of Separated over fire air damper/panel (part of scope of combustion modification only), failures during hydro test (hydro test is in Customer's Scope).Vendor need to take approval from Boiler Directorate/Bihar under Section 392 of IBR. Vendor has to co-ordinate with Boiler Directorate/Bihar for approval of Drawings for the subject work. Arrangement for inspections/approval through Boiler Directorate/Bihar upto hydro test/completion of work.</p> <p>h) All associated Structural works.</p> <p>i) Existing features where are interfering with the new arrangement of BOFA are to be suitably relocated at site to the extent required.</p>

	<p>j) Duct stiffners and insulation at existing items to be adjusted at site for required clearance.</p> <p>k) Dismantling of Mechanical Items like Floors/Platforms/stairs/Ducts/Pr Parts/Soot Blower/Buck stays/Insulation etc, Re-Erection/Re-use of old dismantled items/modification as per drawing/as instructed by Engr I/C.</p>
4.1.4	<p><b>Control &amp; Instrumentation/Electrical:</b></p> <p>Contractor's scope shall include but not limited to the following:-</p> <ul style="list-style-type: none"> <li>• Dismantling of C&amp;I/Electrical Items like Instruments/cables/cable trays/JB's/Ligght/Light Fittings/Soot Blower Connections etc ,Preservation of same for re-use,</li> <li>• Pneumatic actuators with positioners and I/P converters for BOFA dampers</li> <li>• BOFA tilt power cylinders with positioners and shear pin failure indicator and alarm.</li> <li>• Air Filter Regulator and pressure switches/ transmitters in BOFA signal airline.</li> <li>• Flow elements (Aerofoil or as per the standard and proven practice of Contractor) with flow transmitter in BOFA secondary air duct</li> <li>• Solenoids and pneumatic tubing for auto purging of BOFA flow element.</li> <li>• Instrumentation and control cables, power supply distribution cables, special cables (such as Scanner pig tail cable) along with accessories for interconnection/ integration of C&amp;I instruments/equipment of system with existing unit DDCMIS.</li> <li>• LIE/LIR, Instrument hook up material, erection hardware, impulse tubing/ piping, fitting, racks, enclosures, junction boxes etc. for C&amp;I.</li> <li>• Branch cable trays up to field Junction boxes.</li> <li>• Instrument air piping from the existing instrument airline to existing and new equipment/instruments.</li> <li>• Instrument air distribution SS tubing, fittings for SADC /BOFA actuators, Corner Nozzle valves, HEA ignitors, Burner Tilt Power cylinders and BOFA Tilt Power cylinders.</li> <li>• Two (02 nos.) of CO analyzers at Economizer outlets of each unit. Tapping points for CO analyzers, suitable for analyser mounting, shall be erected at Economizer outlet ducts.</li> <li>• Microprocessor based electronic positioners with all the pneumatic operated control valves/ dampers being erected and commissionned. For burner-tilt application, Microprocessor based electronic positioners with remote positioner units shall be provided. However, pneumatic positioners along with I/P converters are also a part for SADC BOFA dampers.</li> <li>• All associated Electrical, Control &amp; Instrumentation works.</li> </ul> <p>Note: - Dismantled HEA ignitors, Flame scanners, Burner tilt actuators &amp; SADC actuators along with I/P converters, 1/4" Air Filter Regulator and pressure switches shall be re-used.</p>
4.2	<b>DETAILS SCOPE OF WORK</b>
4.2.A	<p>Dismatling activities and items to be retained properly &amp; to be re-used/re-erected/modified/commissioned.</p> <p>The contractor shall carry out Dismantling, Removal, Shifting of any obstructing Pr Parts, structures, buck stay, pipe lines, cables &amp; cable trays, boiler lighting arrangement,wall blower system at BOFA panel elevation ,facilities etc. and upkeepment of the items for Re-Use/Re-Erection/Modification as per drawing/Instruction of Engr I/C.</p> <p>A. Following Items to Be dismantled, preserved &amp; to be re-used/ re-erected/ modified/ commissioned:-</p> <p><b><u>MECHANICAL ITEMS:</u></b></p> <ul style="list-style-type: none"> <li>• Insulation cladding, wool, refractory etc as required.</li> <li>• Structure components like Platform, hand rails, floor gratings, stair cases, ladders etc of Different Elevation as required.</li> <li>• Existing Wind box assembly, coal burner, Coal nozzle tip, coal piping, hangers etc</li> <li>• Misc structural items(channel, Angles, Beams etc.)</li> <li>• Wall blower,soot blower, its piping as required.</li> <li>• Duct, duct support, expansion below etc as required.</li> <li>• Buckstay beams and its associated members like leveller guide, scalloped bar, pin etc.</li> <li>• Water wall panels/tubes/ bends as required.</li> <li>• Burner Nozzles (air/coal/oil).</li> <li>• Coal Pipe Bends/elbows as required.</li> <li>• Removal / dismantling of FIE (Fuel Inlet Elbows = 36 Nos) for all four corners at all elevation. Transporatation of FIE's to designated location as decided by BHEL/ Customer</li> </ul>

- Removal of Oil Guns, Gun Guide Pipes, HEA Ignitor, its fittings & its guide pipes, Scanner & their guide pipes. Proper care shall be given while dismantling as these items shall be reused, Oil Gun Vice assy & Rack, Air Cooled Oil gun Assemblies, oil gun mainmtenance box, oil gun vice assy an rack.
- Burner station skid assemblies.
- Corner station piping, valves & fittings.
- Coal piping, coal pipe coouplings, supports etc( as required).
- Buckstays in the wind box and BOFA locations.
- Any other piping, supports, valves and fittings etc.
- Removal of all Coal Nozzles from coal compartment for all four corners. Replacement of Nozzle tips with new tips & inert back the nozzles to burners coal compartments.
- Instrument Air, Service Air Line as required.
- Any other mechanical items not mentioned above but required to be dismantled & re-erected/re-used/modified for completion of the sytem, same to be carried out by vendor as per instruction of Engr I/C without any extra cost

C&I & ELECTRICAL ITEMS :

- 44 NOS Flame scanner Head assemblies, Cooling air piping, Scanner hoses.
- Furnace flame viewing camera/system.
- ASLD etc.
- SADC and Burner tilt power cylinders/actuators.
- Cable trays and cables, which are fouling with DE-NOX system duct panels etc.
- Existing Pressure gauges in Corner skid for oil and atomizing medium.
- Wind box to Furnace DP Transmitters and impulse piping.
- Tapping point for any Instrument in water wall.
- Field cables and Junction boxes in Boiler Operating Floor/Firing Floor/ air and flue gas path as applicable.
- Existing SADC I/P converters, 1/4" Air Filter Regulator in existing SADC signal airline, Existing SADC signal air Line pressure switches.
- Illumination items.
- Existing secondary air flow measurement element and transmitter along with cable & accssories.
- Existing corner oil skid, instruments in oil line, trip valves and control valves along with all associated cables.
- Field JBs and impulse piping.
- All existing cables between existing SADC actuators I/P, pressure switch and SADC/FSSS panel.(including field cables till local JB).
- All existing cables between existing corner oil skid, HEA ignitors, oil gun, LGM box and FSSS panel(including field cables till local JB).
- All existing Power, Control & Instrumentation cables for Soot Blowers.
- Existing instruments in air and flue gas path, associated cabling, field JB's and Impulse piping.
- Any other C&I/Electrical items not mentioned above but required to be dismantled & re-erected/re-used/modified for completion of the sytem, same to be carried out by vendor as per instruction of Engr I/C without any extra cost.

Note: - The above item list are tentative only. If any other item required to be dismantled/re erection/modification for completion of De-Nox system, the same to be carried out by vendor without any extra cost.

B. Work to be done as under:-

- i) Dismantling, Removal, Shifting of any obstructing items (Mechanical, C&I, Electrical) as mentioned above for De-Nox.
- ii) Upkeepment/preservation of the items for re-use, re-erection, modification, welding, alignment, laying, termination, commissioning, PG Test as per instruction of Engr I/C/Drawing as reqd.
- iii) Relaying/re-erection of Instrument air, service air, other dismantled pipe lines, lighting system, cables, cable trays, jb's etc.
- iv) Disposal of scrap to the scrap yard or as instructed by Engr I/C inside plant premises.
- v) Instrument air distribution SS tubing, fittings for SADC actuators, Corner Nozzle valves, HEA ignitors, Burner Tilt Power cylinders Power cylinders.

	<p>vi) Dismantling/Modification of existing Wind box assembly, coal burner, Coal nozzle tip, coal piping, hangers etc.</p> <p>vii) Preservation of Scanners and HEA Ignites and critical equipment which can be reused again shall be cleaned and stored in proper shed and shall be reused/ re erected/restored.</p> <p>viii) Restoration/re-erection of all removed structure, floor grills, air lines, hand rails, Re-erection of removed insulation and cladding with the help of hooks and retainer plates. Existing access openings/observation doors are to be retained. Restoring JB, cable, cable tray as and where applicable. Dismantling &amp; Removal of scaffolding and other temporary structures &amp; arrangements made for handling after completion of work &amp; Transportation of removed material and other scraps generated during the work to disposal yard/handing over the same to NTPC customer. Any other alteration which is done for modification is to be restored in original position without any extra charge. If any modification of floor/ bracing is required to successfully complete this BOFA modification job which is not mention here, same has to be carried out with out any extra cost.</p> <p>ix) Existing Floor at 51.850 Mtrs, &amp; other Elevations to be modified to clear BOFA assembly &amp; Ducting.</p> <p>x) Modification of Existing Floors as per drawing/guidance of Engr I/C.</p> <p>xi) Existing Buckstay at El 51.00 Mtrs to be modified at corners.</p> <p>xii) Horizontal Bracings interfering with BOFA system to be modified to clear BOFA &amp; Ducting.</p> <p>xiii) Duct Stiffeners &amp; Insulation at existing items to be adjusted locally at site for clearance.</p> <p>xiv) All the existing features which are interfering with the proposed arrangement of BOFA are to be suitably relocated at site to the extent required.</p> <p>xv) Supply &amp; application of paints for the re-erected/re-used/modified items.</p> <p>xvi) Fabrication of Floors/benches (where ever required)</p>
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**Tentative quantity of work:-**

- Approx weight to be dismantled will be 50 MT per Unit, for 3 no Units total weight to be dismantled is 150 MT (Approx).
- Approx weight to be re-erected/re-used will be 30 MT per Unit, for 3 no Units total weight to be re-erected / re-used is 90 MT (Approx).
- Qunatity mentioned above may vary to any extent, no extra paymnet shall be made for quantity variation to complete NOx modification job.

4.2.B	ERECTION, TESTING, COMMISSIONING & PG TEST WORK OF NEWLY SUPPLIED MECHANICAL ITEMS
	Tentative weight of new materials envisaged for erection is 201 MT per Unit (Refer Annexure -II of TCC) i.e for Three Units is 3X201 = 603 MT. Quantity may be increase or decrease as per site requirement. Paymnet will be made on prorata rate basis as per actual quantity.
4.2.B1	TENTATIVE PRE SHUTDOWN / PREPARATORY WORKS
B1.1	All Necessary arrangements are to be made for handling, lifting, shifting, erection, placement, assembly, matching, alignment, supporting, welding, cutting, grinding, drilling, DPT, Radiography, Heat Treatment and other associated works etc. for the materials to be erected/dismantled. Including providing of all required Manpower, T&Ps, MMDs, Consumables and Other Materials.
B1.2	All necessary arrangements are to be made by the contractor for transportation of materials including providing of all required Manpower, Hydras, Trailers, Tractors and other means of transportation along with operators & fuel.
B1.3	Removal & replacement of structural floors, beams, bracings, cable trays buckstays or any other structure and system fouling with duct routing. BOFA Duct laying from Hot air duct (Left & Right) near windbox (El 38.50 Mtr tentatively) to BOFA assembly above Burner area (El 50.20 Mtr tentatively). Relocation of stairs.
B1.4	Removal of fouling structural floors at Elevation (tentative) 51.850 Mtr & other elevations as per BHEL requirement.
B1.5	Modification of structural floor to accommodate New ducting (Hot air duct to BOFA Panels) system as per BHEL drawing/Instruction of Engr I/C.
B1.6	Placement, erection of strucual beams, bracings, floor grills, hand rails, pipes etc. Erection, fitup & welding of structures & platforms. Self drilling screw for floor grills is in the subcontractor's

	scope.
B1.7	Erection & welding of structure as per BHEL standards & quality plan. LPI of all welded beams, bracings. Supply of all consumables including Welding electrodes is in subcontractor scope.
B1.8	Modification of Stair & Floor as per drawing/as required.
B1.9	Erection & Placement of Benches required for operation for all newly installed systems.
B1.10	Area cleaning for the placement of duct pieces before assembly. Pre assembly of Duct for BOFA system. Seal Welding of duct as per BHEL norms. Checking of dimensions as per quality plan.
B1.11	Erection of temporary platforms at boiler floors for duct assembly work.
B1.12	Routing & Erection of Duct from BOFA System to Hot secondary air duct (Left & Right side of furnace) to the extent possible before shutdown.
B1.13	Erection of duct supports, guides, hangers as per BHEL drawing & site requirement.
B1.14	Erection of Access doors & providing access structural platforms as per drawing & site requirement.
B1.15	Erection of Junction Box (JB's) near the BOFA Panels. Erection of Cable trays & Laying of Cables to the extent possible during preshutdown.
B1.16	Arrangement of Scaffolding materials & erection of scaffolding for outside furnace area as required.
B1.17	Arrangement of sufficient illumination for erection work to be arranged by vendor. Note: 24 V DC lights with transformer to be arranged by vendor for confined area work.
4.2.B2	<b>TENTATIVE SHUT DOWN WORKS</b>
4.2.B2.a	<b>SCAFFOLDING</b>
B2.a.1	Arrangement of scaffolding materials & erection of same in outside boiler (except boiler 1 st pass furnace inside) area is in vendor Scope.
B2.a.2	For Erection of scaffolding in inside Boiler Furnace 1 st pass & arrangement of Scaffolding material for the same, refer sl no 4.2.E & 4.2.F of this TCC.
4.2.B2.b	<b>Windbox / Burner</b>
B2.b.1	Locking of Coal pipes before removal of Elbow / Gate valve from coal pipes.
B2.b.2	Installation of New or dismantled FIE (Fuel Inlet Elbow) as decided by BHEL. Replacement of coal pipe couplings /gaskets.
B2.b.3	Transportation & handing over these items to BHEL / customer stores.
B2.b.4	Replacement of Oil / Air / End Air /CC-OFA nozzle tips for all four corner burners including modification in winbox compartment to suit new designed nozzles. Reinstallation of Guidelines of Oil/HEA/Scanner. Scaffolding required to complete job shall be in subcontractor scope.
B2.b.5	Modification in the windbox SADC dampers by welding of locking plates, shielding plates as per BHEL Drawing. After modification ensure free rotation of dampers in all compartments.
B2.b.6	Scanner Air header modification / Rerouting as per site requirement.
B2.b.7	if any modification required in new nozzle tips at site due to difficulty in reinstallation of guide pipe of OIL/HEA/Scanner same to be executed at site by agency without any cost impact
4.2.B2.c	<b>DUCT (Hot Air to BOFA) , Buckstay,Insulation &amp; Structures</b>
B2.c.1	Routing & Erection of Duct from BOFA System to Hot secondary air duct (Left & Right side of furnace) as per drawing & site condition.
B2.c.2	Supporting of duct as per drawing & site requirement.
B2.c.3	Erection of duct expansion bellows & supporting as per drawing & site condition.
B2.c.4	Buckstay (front & rear) to be relocated with & modified to link with BOFA Assy (Tentative EL51000). Buckstay (Left & Right) at EI 47075(Tentative) to be removed as per drawing.
B2.c.5	Relocation of Wall blowers at EI 46050 (tentative) on left & right side (Approx.5 Nos Each side) to be lowered by 500( approximate) mm to clear BOFA ducting. Rerouting of wall blowers steam pipe header & its supports.
B2.c.6	Gas / Air tightness test of Duct as per BHEL procedure.
B2.c.7	Welding of insulation fixing components at ducts, fixing of mineral wool as per BHEL standards.
B2.c.8	Laying of Insulation, Refractory & Cladding as per BHEL norms. Application of castable & pourable refractory for buckstay, wall blowers, peepholes, access doors, burners w w transition tubes etc.

B2.c.9	Additional floors are to be added at EL (tentatively) 44850, 48350, 51850 & other Elevations as per Drawing/ Instruction of Engr I/C. Floor items wherever required to be fabricated from standard size structure materials, without any extra cost.
B2.c.10	Kersone test to be carried out for duct welding.
4.2.B2.d	<b>BOFA Panels</b>
B2.d.1	Transporataion of BOFA panels to site from stores.
B2.d.2	Cutting of Water wall above burner to accommodate new BOFA system. Fitup of WW tubes to BOFA Panel tubes. Welding of HP Joints by IBR welder.
B2.d.3	Vendor need to take approval from Boiler Directorate/Bihar under Section 392 of IBR. Vendor has to co-ordinate with Boiler Directorate/Bihar for approval of Drawings for the subject work. Arrangement for inspections/approval through Boiler Directorate/Bihar upto hydro test/completion of work.
B2.d.4	100% Radiography of the new HP Joints as per IBR including necessary, rectification of the defects observed during radiography. Pre Heat & PWHT (if required).
B2.d.5	Connection welding of BOFA system to newly erected duct. Supporting of BOFA system.
B2.d.6	Erection of power cylinders for New BOFA system at four elevation in all for corners. Stroke adustment / tuning of power cylinders. Adjustment / tuning of existing SADC power cylinders.
B2.d.7	Laying of Instrument air line from existing header to all newly installed power cylinders. & other installed systems as per site requirement.
B2.d.8	Approch Platform erection. Erection & placement of benches for operating the installed instruments / systems as per drawing and site requirement.
B2.d.9	Existing Flame viewing system (FVS) on left & right side wall to be relocated at El 51000 (Tentative). Cutting of water wall to accommodate FVS. Welding of spool ww piece. Erection of approch platform for FVS.
4.2.B2.e	<b>Other Work</b>
B2.e.1	Additional Floors to be added at El 44.850 Mtrs, El 48.350 Mtrs, and El 51.850 Mtrs as per drawing/guidance of Engr I /C.
B2.e.2	Fabrication of Floors/benches (where ever required)
4.2.B2.f	<b>SUPPLY &amp; APPLICATION OF PAINTS</b>
B2.f.1	The contractor's scope of work includes supply & application of paints of all equipment and structures which are supplied new & of those items which will be re-used as per the Employer's standard color coding scheme which shall be furnished to the Contractor. The painting of various components shall comply with the requirements stipulated in different part of this specification. However, for components where no specific requirement is stipulated, the painting conforming to the requirements stipulated below shall be provided. The quality and finish of paints shall be as per standards of BIS or equivalent. The surfaces which have surface temperature of 95 degree Celsius (with or without insulation) shall be applied with at least two coats of high temperature primer/ paint with total OFT not less than 40 micron.
B2.f.2	Red oxide paints to be applied on all weld joints.
4.2.B2.g	<b>Inslutaion &amp; Refractory Work</b>
B2.g.1	Insulation to be applied in Pr Parts, Water Wall, Ducts as per drawing/Instruction of Engr I/C.
B2.g.2	Refractory to be applied as per drawing/instruction of Engr I/C.
B2.g.3	Self tapping screw for insulation to be supplied by vendor.
B2.g.4	Cutting of cladding sheets as per the profile of the equipment and painting on inner surface two coats of bituminous paint. Black Bituminous Paint will be supplied by Contractor
4.2.B2.h	<b>Commissioning Activities</b>
B.2.h.1	Contractor shall provide qualified manpower with necessary T&P for testing and commissioning of system for conducting Hydro test, air tightness test, commissioning of SADC system & BOFA system etc. Attending any defects / deficiency observed during the commissioing activity.
4.2.B.3	<b>Post Shutdwon Commissioning activities/fine tuning &amp; Performance Guaratee test</b>
B.3.1	Contractor shall provide qualified manpower with necessary T&P for post shutdown testing, commissioning & fine tuning of the system.Full necessary assistance for conducting performance guarantee (PG) test etc as required to complete the system. Attending any defects / deficiency

	observed during this period for successful completion of PG Test.
4.2.C	ERECTION, TESTING, COMMISSIONING & PG TEST WORK OF NEWLY SUPPLIED C&I & ELECTRICAL ITEMS (Refer Annex-III of this TCC for tentative list of New C&I & Electrical Items)
C.1	Control instrumentation for New BOFA power cylinders, erection of I/P converters, pressure switches, flow transmitters, LIE / LIR, hook ups, BOFA air flow pitot tube. Including laying of cables to Junction box. Erection of New Junction Boxes. C&I of all other work required to complete given scope of work.
C.2	Pneumatic actuators with positioners and I/P converters for BOFA dampers, BOFA tilt power cylinders with positioners and shear pin failure indicator and alarm. Air Filter Regulator and pressure switches/ transmitters in BOFA signal airline.
C.3	Flow elements (Aerofoil or as per the standard and proven practice of Contractor) with flow transmitter in BOFA secondary air duct. • Solenoids and pneumatic tubing for auto purging of BOFA flow element
C.4	Instrumentation and control cables, power supply distribution cables, special cables (such as Scanner pig tail cable) along with accessories for interconnection/ integration of C&I instruments/equipment of system with existing unit DDCMI, Instrument hook up material, erection hardware, impulse tubing/ piping, fitting, racks, enclosures, junction boxes etc. for C&I:
C.5	Branch cable trays up to field Junction boxes, Instrument air piping from the existing instrument airline to existing and new equipment/instruments, Instrument air distribution SS tubing, fittings for SADC /BOFA actuators, Corner Nozzle valves, HEA ignitors, Burner Tilt Power cylinders and BOFA Tilt Power cylinders
C.6	Two (02 nos.) of CO analyzers at Economizer outlets of each unit. Tapping points for CO analyzers, suitable for analyser mounting, shall be erected at Economizer outlet ducts
C.7	Microprocessor based electronic positioners with all the pneumatic operated control valves/ dampers being erected and commissioined. For burner-tilt application, Microprocessor based electronic positioners with remote positioner units shall be provided. However, pneumatic positioners along with I/P converters are also a part for SADC BOFA dampers
C.8	All associated Electrical, Control & Instrumentation works
C.9	Erection & Commissiong of CO analysers at ECO Outlet duct. Erection of approch platform & benches for CO analyser. 4 nos CCTV are to be erected and commissioned at bottom ash hopper.
C.10	Erection, installation, cable laying, cable termination, commissioning of all newly supplied C&I & Electrical system.
C.11	Installation of all pneumatic actuators including pneumatic cylinders, solenoid valves, and pneumatic accessories limit switches etc.
C.12	Laying of instrument air pipes to various valves and instruments form the terminal points onward as required.
C.13	Laying of cables, cable trays, JB's, cable termination with instruments, ferruling, tagging, testing, commissioning & PG test.
C.14	Branch cable trays up to field Junction boxes for the newly supplied cables.
C.15	Instrumentation and control cables, power supply distribution cables, special cables (such as Scanner pig tail cable) along with accessories for interconnection/ integration of C&I instruments/equipment of system being renovated/upgraded with existing unit DDCMIS
C.16	Instrument air piping from the existing instrument airline to existing and new equipment/instruments
C.17	Installation of Two (02) nos. of CCTV cameras (High Definition (HD) fixed type) outside the furnace (one on left and right side) at about 10.5 M elevation. Installation of Seal Boxes fitted with sight glass in each side of boiler water walls
C.18	Installation of Two (02) nos. of CCTV cameras (High Definition (HD) fixed type) outside the bottom ash hopper at about 8 M elevations.
C.19	E&C of Burner Tilt shear pin failure system, Flame scanner pigtail cable, Furnace bottom ash viewing CCTV cameras.
C.20	Instrumentation and control cables, power supply distribution cables, special cables (such as Scanner pig tail cable) along with accessories for interconnection/Integration of C&I instruments/equipment of system being renovated/upgraded with Existing unit DDCMIS.
C.22	Quantity & Size of C&I & Electrical Works/Items may vary to any aextent. No extra paymnet shall be made for quantity/size variation.

4.2.D	MATERIAL HANDLING JOB: RECEIPT, UNLOADING, TRANSPORTATION, STORAGE, WATCH & WARD OF MATERIALS TILL THE COMMISSIONING OF THE UNIT & RECONCILIATION OF THE MATERIALS.
4.2.D.1	NEW MATERIALS SUPPLIED BY BHEL MANUFACTURING UNIT / BHEL VENDOR
D1.1	Material for combustion modification system shall be supplied by BHEL manufacturing unit / BHEL vendor. All the materials are to be unloaded and stored at BHEL / NTPC stores/ open yard by the contractor. Location of unloading will be intimated by BHEL site engineer. Unloading is to be done as per instruction of BHEL site engineer.
D.1.2	Unloading, stacking, reloading the materials/ equipment received, wherever/whenever required, to trucks/ trailers etc. & transportation to stores/ storage yard/ work site at subject project, unloading and stacking at site stores/storage yard/ work site in line with BHEL storage manual and as per the instruction of BHEL engineer.
D.1.3	Material Receipt/unloading/staticking/storage/upkeep /verification /record keeping /issue/assistance for insurance /reconciliation/ watch & ward.All records are to be kept/entered in computer as well as in registrar.
D1.4	The contractor shall maintain computerised records as well as in Registrar for receipt of materials, issued to BHEL's vendors and return by BHEL's vendors in BHEL standard format/ BHEL Computerised system like (ISCMS/E-store etc). Monthly report shall be produced by contractor and Suitable soft & hard copy be maintained as a back up. Vendor need to keep record of all received items, its location of unloading, issue details etc. After completion of job vendor will have to provide reconciliation of materials.
D.1.5	The contractor shall assist for raising insurance claim in case of damage, short supply, theft or any other cause in consultation with BHEL engineers and assist during survey work by the surveyor of insurance company. For theft of materials, contractor shall raise FIR with local police
D.1.6	Complete manpower, T&P, crane/ hydra & its operator & consumables etc. required for convenient unloading, transportation to store & store to erection site of material is to be provided/ arranged by contractor.
D.1.7	Services for watch & ward of BHEL Material, it may be its own store/BHEL store/ NTPC store/open yard. Agency have to arrange suitable watch and ward facility on round the clock basis along with store supervisor.
D.1.8	Preliminary verification of materials at the time of unloading reporting discrepancies like damages and storages, raising insurance, coordinaton with insurance agency if noticed. The contractor shall raise insurance claim in case of damage, short supply, theft or any other cause in consultation with BHEL engineers and assist during survey work by the surveyor of insurance company. Inurence is under BHEL- scope.
D.1.9	The contractor shall raise MDR & monthly MIR pertaining to material management in Consultation with BHEL engineers.
D.1.10	Contractor is advised to keep ready his T&P, hydra etc. for unloading the material at site/stores and should report to site immediately for unloading of such item when ever asked for. Contractor will be intimated timely to mobilize for such activity.
D.1.11	Stacking and storing of materials at Customer open storage yard or covered stores or semi-closed sheds as per BHEL site engineer instructions. Storage & Preservation of materials received inside the project premises up to erection of same shall be in accordance with BHEL's preservation manual or as per BHEL's instructions. Submission of stacking/storing records. All arrangements like Wooden sleepers / concrete blocks / steel frames and tarpaulins, preservatives, paints etc for this purpose wherever deemed necessary shall be made by sub-contractor.
D.1.12	Detailed verification of materials within 07 days with reference to packing list and loading advice slip after unpacking of boxes; repacking after detailed verification; preparation of receipt inspection reports.
D.1.13	Issue of materials for execution of work at site. Identification of Materials at Stores & their transportation from stores to site including Necessary shifting/removal of other materials stacked on the identified material, un packing of the materials, removal of any obstructions & hindrances etc
D.1.14	Maintenance of area where the material will be kept by means of proper lighting, cleaning in and around storage yards and sheds. General cleaning, controlling vegetation growth and upkeep of storage yard, covered and semi-closed /stores sheds.

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D.1.15	Supply of material is expected to commence from February' 2020. Approximate weight of material to be unloaded at site is around 210 MT/Unit, i.e 630 MT for all three units. Final weight for unloading may be increased / decreased as per actual shipment from BHEL Manufacturing units. Refer annex-II for New Mechanical Item List & Annex-III for C&I/Electrical Item list. Paymnet will be made on prorata rate basis as per actual quantity. If the consignment is not unloaded in time and BHEL had to pay any detention/ demurrage then the amount of such charges + 30% over head in each case shall be deducted from from contractor's R.A. bill or any other dues.	
4.2.D.2	EXISTING OLD MATERAILS	
D.2.1	SHIFTING/RE-STACKING of existing old materials kept in covered Stores/semi covered store/open yard to create storage space for new material.	
D.2.2	Approx weight of existing/old materials shifting/re stacking inside cover store/semi covered store/material yard is 10 MT for three units. Paymnet will be made on prorata rate basis as per actual quantity.	
4.2.E	Erection of cup lock Scaffolding along with Steel Planks, Staircase, handrails etc. for 1 st Pass Inside Boiler Furnace:	
4.2.E.1	<ul style="list-style-type: none"> <li>a) Receipt &amp; transportation of Scaffolding Materials from NTPC store to site.</li> <li>b) Erection of Scaffolding.</li> <li>c) Dismantling of Scaffolding on completion of work.</li> <li>d) Return of Scaffolding material to customer store.</li> <li>e) This scaffolding work to be carried out during shutdown period, however material shifting to be carried out during pre-shutdown period.</li> </ul> <p>Note: sl. no.4.2.E may not be excuted in case customer carries out the same during execution, In that case payment shall not be made against sl no 4.2.E.</p>	
4.2.F	Arrangement of cup lock Scaffolding materials along with Steel Planks, Staircase.hand rails etc. for 1 st Pass Inside Boiler Furnace:	
4.2.F.1	<ul style="list-style-type: none"> <li>a) For making Scaffolding upto 55 Mtr Elevation inside Boiler furnace 1 st pass.</li> <li>b) Approximate dimension of furnace inside is 19.939 Mtrs X 16.559 Mtrs.</li> <li>c) Requirement of these scaffolding will be during shutdown perio, however all materials to be made available at site before commencement of shutdown.</li> </ul> <p>Note: sl. no.4.2.F may not be excuted in case the same is arranged by customer during execution, In that case payment shall not be made against sl no 4.2.F.</p>	
5.0	GENERAL SCOPE OF WORK	
5.1	Vendor need to take approval from Boiler Directorate/Bihar under Section 392 of IBR. Vendor has to co-ordinate with Boiler Directorate/Bihar for approval of Drawings for the subject work. Arrangement for inspections/approval through Boiler Directorate/Bihar upto hydro test/completion of work.	
5.2	The Sub-contractor has to obtain all statutory clearances and permissions from concerned authorities as required for the work and they must observe and strictly adhere to all labor & industrial laws, and other statutory laws, acts & regulations as applicable for the contract.	
5.3	The Sub-contractor has to provide all required skilled & semi-skilled labors & technicians, experienced engineers & supervisors, qualified Electricinan, qualified Quality & Safety Engineer/supervisor and other Manpower.	
5.4	The Sub-contractor has to provide all required Tools & Plants (T&Ps) in sufficient quantities including Trucks/Tractors/Trailers, Hydra cranes, Winch Machines, Multi Sheave Pulley Blocks, Chain Pulley Blocks, Pulls & Lifts, Slings, Eye Bolts, D-Shackles, Turn Buckles, Hoists, Hydraulic Jacks, Manual Jacks, Torque Wrenches (up to 750 KG – M), Alignment Clamps, Pipe Clamps, Welding Machines. Gas Cutting Sets, Arc Welding Sets, Spanners (up to 90 mm), TIG set,Files, Grinders, Drill Machines, Taps & Dies, Tube Bending Machine, Tongue tester, meggar, Water Washing Hose Pipes and Attachments and all other types of Tools & Plants. Tentative Requirement shall be as per Annexure- V	
5.5	The Sub-contractor has to provide all required Measuring & Monitoring Devices (MMDs) in sufficient quantity including Master Level (0.02 mm/m), Spirit Level, Straight Edge, Water Level, Dumpy Level, DPT Kit, Piano Wire, Plumb Line, Measuring TapeScale, Vernier Calipers, Column Alignment Checking Instruments, Tri Square and all other types of Measuring & Monitoring Devices (MMDs). Tentative Requirement shall be as per Annexure-V	
5.6	The Sub-contractor has to provide all required Consumables including Welding Electrodes & Filler	

	Wires (BHEL approved only), D.A., Oxygen, Argon, Nitrogen and other Industrial Gases, DPT & MPI Consumables, Blue Paste, Diesel, Petrol, Kerosene and other oil, Rust Remover Compound, Sealing & Jointing Compounds, Cloths, Emery Paper, Coir Rope and all other types of Consumables as per site requirement as per Annexure – VI
5.7	Vendor has to arrange following items like tarpaulin, plastic sheets, wire brushes and all other types of other materials & resources required for completion of work
5.8	The Sub-contractor has to provide following items like all lugs of size 2.5 sq mm & below, all ferules etc. asbestos ropes for manhole doors (if required).
5.9	Proper Arrangement of House Keeping, strict compliance of Health Safety & Environment norms of BHEL, Day to Day cleaning of the entire working area and final area cleaning on completion of work including arrangement of water washing equipments and accessories is included in the Scope of Work of the Sub-contractor.
5.10	Electrical power connection at one point only and supply for execution of job shall be on chargeable basis & contractor has to arrange for distribution to various work place at site. Vendor has to arrange power cable, junction box, MCB's ELCB's etc as required power power intake. Supply used for stores and office shall be on chargeable basis. For this the sub-contractor shall apply to NTPC for electrical connection to concerned distribution agency of NTPC after completing all formalities. Bills for electricity consumed for office and stores will be settled by the sub-contractor. All necessary arrangements i.e. extension switch boards with MCBs of required capacity for tapping power shall be arranged by sub-contractor.
5.11	Space for Office and Stores shall be provided to the sub-contractor and the Sub-contractor has to build and furnish office & stores at their own cost. The sub-contractor shall arrange for sufficient nos. of flood lights and other arrangement for ensuring round the clock work. Necessary co ordination with stores and other agencies shall be in the scope of the sub-contractor.
5.12	The sub-contractor shall submit daily progress report and attend review meeting with BHEL on day to day basis.
5.13	The sub-contractor shall arrange accommodation, transport, medical, sanitary, safety and other arrangements for all Manpower at their own cost.
5.14	The sub-contractor must maintain proper system of documentation for Quality, Safety, HSE and other aspects so as to fulfill the requirement of ISO, OHSAS, 5S, SA 8000 and other National/International Standards
5.15	All necessary arrangements are to be made by the sub-contractor for transportation of materials including providing of all required Manpower and Cranes, Hydras, Trucks, Trailers, Tractors and other means of transportation
5.16	All Necessary arrangements are to be made for handling, lifting, shifting, erection, placement, assembly, matching, alignment, supporting, welding, cutting, grinding, drilling, DPT, RT, SR and other associated works etc. for the materials to be erected/dismantled. Including providing of all required Manpower, T&Ps, MMDs, Consumables and Other Materials.
5.17	The sub-contractor shall carry out Dismantling, Removal, shifting of any obstructing structures, pipe lines, cables & cable trays, facilities etc. as required including restoration of the same on completion of work. Any re routing of pipelines, cables and cable trays, equipments facilities etc, if required, shall be carried out by subcontractor free of cost and shall be done in the pre-shutdown period up to the extent possible.
5.18	All Necessary Preparation, Development, Barricading and Marking of the Area has to be made by the sub-contractor for Storage, Fabrication, and Pre Assembly & Erection of the Materials.
5.19	The sub-contractor has to carry out Erection of Scaffolding, Platforms, Approaches as required including arrangement of scaffolding materials for otherl areas except 1 st pass inside of Boiler Furnace. Dismantling of the same on completion of work. Note: For Erection & supply/arrangement of scaffolding materials for 1 st Pass Inside Boiler Furnace, refer sl no 4.2.E & 4.2.F of this TCC.
5.20	Identification & Receipt of Materials at Stores & their transportation from stores to site including Necessary shifting/removal of other materials stacked on the identified material, un packing of the materials, removal of any obstructions & hindrances etc.
5.21	Transportation of dismantled components, scraps & debris generated and other materials removed to

	disposal yard/stores on day to day basis. After completion of work, cleaning & shifting of all type of scrap from site to scrap yard and Transportation balance/surplus materials to store.
5.22	RT, SR, DPT of Pr Parts weld joints and other components as per BHEL norms.
5.23	Fabrication of duct, support frame, Platform members etc to be carried out from standard size plates, structures without any extra work wherever required..
5.24	Lying of Insulation, Refractory & Cladding as per BHEL norms including curing of the refractory.
5.25	Laying of instrument air, service air for different equipments wherever required in Boiler.
5.26	All temp, pressure, flow sensing devices, pg test points, and tapping points (Up to root valve) for air /gas /water required for the Boiler shall be covered under the scope of work.
5.27	The erection/fabrication of platforms wherever required for approaching to the different types of instruments, pneumatic actuator and electrical actuator etc shall be covered under the scope of work.
5.28	Supply & application of Painting of the structures, piping, equipments & other components as per BHEL norms including supply of paints The codes and standards applicable, preparation of surfaces, primer paint, finish paint, shall be as per enclosed Annexure – VII.
5.29	Testing and commissioning of all equipments & systems including installation of testing equipments, tapping points etc. and rectification of defects observed including replacement/re erection/rectification of components as required.
5.30	Trial operations of all equipments & systems and rectification of defects observed including replacement/re erection/rectification of components as required.
5.31	Insulation of expansion joints, dampers, etc shall be carried out after NDT / gas tightness test is completed.
5.32	Necessary assistance for other Tests of Equipments & Systems and other pre commissioning & commissioning activities and rectification of defects observed including replacement/re erection/rectification of components as required.
5.33	Necessary assistance for Performance Guarantee Test including installation of testing equipments, tapping points etc. and necessary adjustments/rectification as required.
5.34	Necessary assistance for Hydro test, commissioning of the unit upto full load and rectification of defects observed including replacement/re erection/rectification of components as required.
5.35	All works are to be carried out as per drawings and as per instruction of BHEL Engineer and all necessary adjustments, setting, alignment, testing and other associated works shall be carried out as per drawings and as per instruction of BHEL Engineer
5.36	For completion of work, the contractor will have to work in round the clock basis. He will not be eligible for any extra charges on account of this.
5.37	All the contractor's employees shall carry identification cards/gate passes while working at site.
5.38	Vendor has to arrange following items like tarpaulin, plastic sheets, wire brushes and all other types of other materials & resources required for completion of work
6.0	<b>GENERAL TECHNICAL REQUIREMENTS (CODES AND STANDARDS)</b>
6.1	Unless otherwise specified, the plant/ equipment shall comply with appropriate Indian Standard or an agreed internationally accepted Standard Specification as mentioned elsewhere in tender, each incorporating the latest revisions at the time of tendering. Where no internationally accepted standard is applicable, the bidder shall give all particulars and details as necessary; to enable BHEL to identify all of the plant/ equipment in the same detail as would be possible had there been a standard specification.
6.2	Where the bidder propose alternative codes or standards, they shall include in their offer one copy (in English) of each standard specification to which materials/ process offered shall comply. In such case, the adopted alternative standard shall be equivalent or superior to the standards mentioned in the specification.
6.3	In the event of any conflict between the codes & standards referred above, and requirements of the tender, requirements which are more stringent shall govern.
6.4	Tools used during erection & commissioning/ completion shall not be accepted except with the specific approval of the engineer.
6.5	Wherever specified or required the plant/ equipment shall conform to various statutory regulations such as Indian Boiler Regulation, Indian Electricity Rules, Indian Explosive Act, Factories Act, etc, wherever required, obtaining approval for plant/ equipment supplied under the specification from statutory

	authorities shall be the responsibility of the successful bidder.
7.0	<b>GENERAL SERVICES TO BE RENDERED BY THE BIDDER</b>
7.1	Services for construction, fabrication, equipment erection, testing as well as trial run & commissioning of various equipment and accessories under the contract shall include but not be limited to the following.
7.2	Issuing materials from store/ storage yard from time to time for erection as per the construction program. The successful bidder shall be the custodian of all the materials issued till the plant/ equipment is officially taken over by the owner/ BHEL after complete erection any successful trial run & commissioning.
7.3	Transport of material to their respective places of erection and erection of complete plant & equipment as supplied under this tender.
7.4	Trial run, commissioning of individual equipment/ sub-systems to the satisfaction of BHEL/ customer.
7.5	Deployment of all skilled & unskilled manpower required for erection, supervision of erection, watch & ward, commissioning and other services to be rendered under this tender.
7.6	Deployment of all erection tools & tackle, construction machinery, transportation vehicles, all other implements in adequate number & size, appropriate for erection work to be handled under scope of this tender, unless otherwise specified.
7.7	Supply of all consumables, eg welding electrodes, cleaning agents, diesel oil, lubricant, etc as well as materials required for temporary supports, etc as necessary for such erection work, unless specified otherwise.
7.8	Providing support services for successful bidder's erection staff, eg, construction of site offices, temporary stores, residential accommodation and transport to work site for erection personnel, watch & ward for security & safety of materials under the successful bidder's custody, etc, as required.
7.9	Maintaining proper documentation of all site activities undertaken by successful bidder as per the proforma mutually agreed with BHEL, submitting monthly progress reports as also any such document as & when desired by BHEL/ owner, taking approval of all statutory authorities, ie Boiler Inspector, Factory Inspector, Inspector of Explosives etc, as applicable, for respective portions of work under the jurisdiction of such statutes of laws.
7.10	All the materials issued to the bidder by BHEL shall be reconciled by the bidder and the unused materials have to be returned back to BHEL stores/ yard or any other place as specified by BHEL.
7.11	After completion of commissioning activity of equipment/ systems, the successful bidder shall prepare test reports which shall include all relevant information related to various commissioning checks, tests carried out, any deviations/ commissioning noticed wrt intended design requirements, sequence of various commissioning activities as actually adopted vis-à-vis as recommended in the procedures, programme schedule achieved and any other such information as required .These test reports shall be submitted in requisite number of copies to BHEL/ Alstom/ owner during the commissioning activities.
8.0	<b>GENERAL GUIDELINES FOR FIELD ACTIVITIES</b>
8.1	The successful bidder shall execute the works in a professional manner so as to achieve the target schedule without any sacrifice on quality and maintaining highest standards of safety and cleanliness.
8.2	The successful bidder shall co-operate with owner/ BHEL and other successful bidders working in site and arrange to perform his work in a manner so as to minimise interference with other successful bidder's works. BHEL's engineer shall be notified promptly of any defect in other successful bidders' works that could affect the successful bidder's work. If rescheduling of successful bidder's work is requested by the owner's/ BHEL's engineer in the interest of overall site activities, the same shall be compiled with by the successful bidder. In all cases of controversy, the decision of BHEL shall be final and binding on the successful bidder without any commercial implication.
8.3	The engineer shall hold daily meeting with the successful bidder working at site at a time and a place to be designated by the engineer. The successful bidder shall attend such meetings and take notes of discussions during the meeting and the decisions of the engineer and shall strictly adhere to those decisions in performing this work. In addition to the above weekly meeting, engineer may call for other meetings either with individual successful bidders or with selected number of successful bidders and in such a case the successful bidder, if called will also attend such meetings.
8.4	Time is the essence of the contract and the successful bidder shall be responsible for performance of his work in accordance with the specified construction schedule. If at any time the successful bidder is falling behind the schedule, he shall take necessary action to make good of such delays by increasing

	his work to comply with the schedule and shall communicate such action in writing to the engineer, satisfying that his action will compensate for the delay. The successful bidder shall not be allowed any extra compensation for such action.
8.5	The engineer shall however not be responsible for provision of additional labour and or materials or supply of any other services to the successful bidder except for the co-ordination work between various successful bidders as set out earlier.
8.6	The works under execution shall be open to inspection & supervision by BHEL/ customer engineer at all times. The successful bidder shall give reasonable notice to BHEL before covering up or otherwise placing beyond the reach of inspection any work, in order that same may be verified, if so desired by owner/ BHEL.
8.7	Every effort shall be made to maintain the highest quality of workmanship by stringent supervision & inspection at every stage of execution. Manufacturer's instruction manual & guidelines on sequence of erection and precautions shall be strictly followed. Should any error or ambiguity be discovered in such documents, the same shall be brought to the notice of BHEL's engineer. Manufacturer's interpretation in such cases shall be binding on successful bidder.
8.8	Successful bidder shall comply with all the rules & regulations of local authorities, all statutory laws including Minimum Wages, Workmen Compensation etc. All registration and statutory inspection fees, if any, in respect of the work executed by the successful bidder shall be to his account.
8.9	All the works such as cleaning, checking, levelling, blue matching, aligning, assembling, temporary erection for alignment, opening, dismantling of certain equipment for checking and cleaning, surface preparation, edge preparation, fabrication of tubes and pipes as per general engineering practice at site, cutting, grinding, straightening, chamfering, filling, chipping, drilling, reaming, scrapping, shaping, fitting-up, bolting/ welding, etc, as may be applicable in such erection and necessary to complete the work satisfactorily, are to be treated as incidental and the same shall be carried out by the successful bidder as part of the work.
8.10	It is the responsibility of successful bidder to do alignment, etc if necessary, repeatedly to satisfy engineer, with all necessary tools & tackles, manpower, etc. The alignment will be complete only when jointly certified so, by the successful bidder's engineer and BHEL. Also, successful bidder should ensure that the alignment is not disturbed afterwards.
8.11	Equipment & material, in case wrongly installed, shall be removed & reinstalled to comply with the design requirement at the successful bidder expense, to the satisfaction of BHEL/ owner.
8.12	After identification of erection materials by BHEL at BHEL's store/ storage yard, it shall be the responsibility of successful bidder to take delivery of materials from BHEL's store/ storage yard by successful bidder's own manpower and re-stack the leftover materials as per erection sequence at BHEL store at their own cost. The entire activities are to be carried out under supervision of BHEL's engineer.
9.0	<b>DEVIATIONS/CLARIFICATIONS</b>
	The bidder is required to submit with his offer in the relevant schedule/ format without any ambiguity. Any assumptions, presumptions, deviations etc indicated or implied anywhere by the bidder except those indicated in the deviation schedule/ format will not be recognized and will not form a part of consideration/ offer. In the absence of such filled-up schedule/ format it will be understood and agreed that the bidder's offer is based on strict conformance to the specification and no negotiation would be allowed in this regard. BHEL reserve the right not to recognize any/ all deviations submitted after opening of the bid.
10.0	<b>DEWATERING</b>
	Vendor will have to arrange pumps, pipes etc in case dewatering is required.
11.0	<b>QUALITY CONTROL &amp; QUALITY ASSURANCE</b>
	Contractor's engineers & supervisors shall be adequately qualified and also inclined to do a quality job. The quality assurance engineer shall co-ordinate all aspects of quality control, inspection, implementation of quality assurance procedures laid down in Quality Plan and technical specification by BHEL. He shall fill up quality assurance log sheets/ formats and submit to BHEL for joint inspection & acceptance. The contractor shall fill up, maintain & preserve the quality records in computerized media. BHEL's/ customer's authorized representative shall be given free access at all time to such quality related records etc for inspection, review etc.
12.0	<b>QUALITY ASSURANCE PROGRAMME</b>

12.1	The contractor shall arrange for suitable quality assurance programme to control all activities pertaining to the scope of work, as necessary. Such programs shall be outlined by the contractor and shall be finally accepted by BHEL. A quality assurance programme of the contractor shall generally cover the following.
12.2	The organisation structure & qualification data of key personnel for management and implementation of the proposed quality assurance program.
12.3	System for site erection control including process controls and fabrication and assembly controls.
12.4	Control of non-conforming items and system for corrective actions.
12.5	Inspection and test procedure for all site related works.
12.6	Control of calibration and testing of measuring and testing equipment.
12.7	System for quality audit.
12.8	System for indication and appraisal of inspection status.
12.9	System for maintenance of records.
12.10	General requirements – quality assurance
12.11	All materials, components and equipment covered under the specification shall be procured, manufactured, erected, commissioned & tested, as applicable, at all stages as per comprehensive quality assurance program. An indicative program for inspection/ test, to be carried out by the successful bidder, for some of the major items is given in the respective volume of tender.
12.12	Field quality plan will detail out the quality practices and procedures etc to be followed by the successful bidder's site quality control organization, during various stages of site activities from receipt of material/ equipment at site.
12.13	BHEL reserve the right to carry out quality audit & quality surveillance of the systems & procedures of successful bidder's quality management. Successful bidder shall provide necessary assistance to enable BHEL to carry out such audit.
12.14	Quality audit/ approval of the results of test & inspection will not prejudice the right of BHEL to reject an equipment service not giving desired performance and shall not in no way limit the liabilities and responsibilities of the successful bidder in earning satisfactory performances of equipment/ service as per specification.
12.15	Repair/rectification procedure to be adopted to make any job acceptable shall be subject to the approval of BHEL.
12.16	All the latest relevant IS codes as per technical specification should be available with the successful bidder at site within 45 days from the date of placement of LOI or otherwise specified by Construction Manager/ Project Manager, BHEL.
13.0	<b>AREA REQUIREMENT</b>
	The contractor shall furnish the estimated area required for the construction of his office etc separately (based on BHEL's customer's design), in their technical bid. The same will be reviewed by BHEL and allotted to the extent available/ considered necessary, depending upon the area availability. Contractor shall also have to arrange the watch and ward of its office within the quoted price.
14.0	<b>PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT</b>
	To meet the need of construction management at site, successful bidder shall provide the following services within accepted rates.
14.1	<b>PLANNING &amp; MONITORING</b>
14.1.1	Within 15 days of placement of order/ LOI by BHEL, successful bidder shall interact with BHEL site for kick-off meeting to discuss & firm up item-wise/ activity-wise schedule of erection, testing, commissioning so as to complete the entire job within the stipulated completion period, matching with project schedule.
14.1.2	Based on the discussion of the kick-off meeting or otherwise, a master schedule shall be drawn and successful bidder shall submit the same within 7 days of kick-off meeting, for review & acceptance/ approval of BHEL. Successful bidder shall interact with BHEL to ensure acceptance/ approval of the master schedule within 7 days of submission.
14.1.3	On the basis of accepted/ approved master schedule, on every month, the successful bidder shall submit to Construction Manager, BHEL schedule-wise plan vs actual status of erection, testing, commissioning, along with action plan to make-up delay, if any.
14.1.4	The project schedule might undergo revision/ modification periodically, for which the successful bidder may have to prepare/ modify schedule periodically in consultation with BHEL, so as to match with

	revised project milestones.
14.1.5	The successful bidder shall ensure monitoring of these activities at least on fortnight basis or at other frequency as mutually agreed with BHEL.
14.1.6	Successful bidder shall submit daily work program based on above schedule. Deferment of above schedule is not acceptable. Successful bidder will adhere to schedule & augment resources to ensure completion as per schedule.
14.1.7	Progress reviews on entire activities will be held periodically as per direction of BHEL, at site/ Kolkata. These meetings will be used as a forum for discussing all areas where progress needs to be expedited. The successful bidder shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.
14.1.8	Successful bidder shall prepare progress report indicating progress on key activities, management summary for critical activities, list of actions require BHEL's attention. The schedule shall preferably be made in Primavera/ MS Projects, so that the same is compatible with BHEL's project management software.
14.2	<b>INFRASTRUCTURE</b>
14.2.1	<p>The successful bidder shall install 1 no all in one PCs (multimedia PC work station Core-i5, 2.1 GHz or above, 500 GB HDD, 4 GB RAM, 100/ 1000 MBPS LAN card) of HP/ Compaq/ Lenevo or equivalent make with window 8 or 7 O/S and required software like MS Office 2010 Professional, AutoCAD 2009 or higher, PageMaker (7.0, etc), ADOBE PDF CREATOR with one no laser jet printer compatible for A3 size printing (ink/ cartridge for which to be supplied as &amp; when required), one no laser jet printer compatible for A4 size printing (ink/ cartridge for which to be supplied as &amp; when required) with power backup at places, 01 no dongle/ broad band connection for internet(every month the dongle should be recharged by vendor for un-interupted internet service) as per instruction of BHEL for exclusive use of BHEL. These computers/ printers shall remain successful bidder's property and they will be allowed to take out the same after completion of original contract period. The successful bidder shall provide data/ information, etc in prescribed formats for periodical updating of progress reports, material management reports, updating of network pertaining to the successful bidder's scope of work, etc.</p> <p>The successful bidder shall also provide 1 no computer operator and 1 number service staff for miscellaneous service for BHEL's use at site for reconciliation, progress review &amp; day-to-day planning purpose, documentation, etc. These facilities are to be provided within 10 days from date of Intimation of BHEL. Computer operator to be provided for 4 months for each unit i.e total 12 months for three units (tentatively during pre shutdown, shut down &amp; Post Shutdwn Commng period), including extension, if the reason for extension is attributable to successful bidder. If case successful bidder fail to provide computer/ printer or personnel as per requirement, for a continuous period of fifteen days or more, BHEL shall have the right to deduct as per following rates on prorate basis, from successful bidder's RA bill or any other dues.</p>
14.2.1.1	@ Rs 15,000/- (Fifteen thousand) per month for computer operator or at actual rate +30%, whichever is lower.
14.2.1.2	@ Rs 10,000 (Ten thousand) per month for computer with printer or at actual rate +30%, whichever is lower.
14.2.1.3	@ Rs 12,000/- (Twelve thousand) per month for service staff or at actual rate +30%, whichever is lower.
14.2.2	In case BHEL extends the service of computer with printer, computer operator or service staff beyond the aforesaid mandatory period, the successful bidder shall extend the service to BHEL, for which BHEL will reimburse following rates.
14.2.2.1	@ Rs 11,000/- (Eleven thousand) per month for each computer operator or at actual rate +30%, whichever is lower.
14.2.2.2	@ Rs 8,000 (Eight thousand) per month for each computer with printer or at actual rate +30%, whichever is lower.
14.2.2.3	@ Rs 9,000/- (Nine thousand) per month for each service staff or at actual rate +30%, whichever is lower.
14.2.3	The successful bidder's site office must have facilities of communications like Fax, E-mail, and telephone with STD facility within a month from LOI.
14.3	<b>PROGRESS REPORTING</b>

14.3.1	The bidder shall submit daily, weekly and monthly progress reports for work force, materials reports, consumables (gases/electrodes) report and other reports as per pro-forma considered necessary by BHEL. In case of any failure on successful bidder's part to comply with this, BHEL may at its discretion, consider to withhold part payment against their RA bills.	
14.3.2	The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which the successful bidder 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.	
14.3.3	The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged.	
14.3.4	Weekly progress review meetings will be held at site during which actual progress during the week vis-à-vis scheduled program shall be discussed or actions to be taken for achieving targets. For discussions, the successful bidder shall present program of subsequent week. The successful bidder shall constantly update/ revise his work program to meet the overall requirement.	
14.3.5	Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of successful bidder will be held once in a month at site/ Kolkata. These meetings will be attended by reasonably higher officials of the successful bidder and will be used as a forum for discussing all areas where progress needs to be speeded up. The successful bidder shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.	
14.3.6	During construction successful bidder shall take adequate digital photograph/ slides (indicating date) each month (not less than nine per week) of the works during progress and submit the soft/hard copy to BHEL office.	
14.3.7	Successful bidder has to provide for electronic/ computerized storing and re-production/ printing/ plotting of various data, log sheets, protocols, measurements etc. These may be stored in CD (as per requirement) and handed over to BHEL as per requirement.	
14.4	SITE ORGANIZATION	
14.4.1	Successful bidder shall maintain a site organization of adequate strength in respect of manpower, construction machinery and other implements at all time for smooth execution of the contract headed by a competent Site In-charge (SIC) for site operations with sufficient level of authority to take site decisions (details ref. annexure-IX). The successful bidder will submit organization chart (showing the name of SIC) with individual bio-data indicating various levels of experts to be posted for supervision in the fields of supervision & execution, quality, material management, planning, safety, etc. The organization shall be reinforced from time to time, as required to make up slippage (if any) from schedule without any commercial implication to BHEL. The organization chart is to be submitted within 10 days from date of LOI.	
14.4.2	Following (minimum) engineering manpower with power plant construction background to be deployed at site by the successful bidder for their day to day supervision, etc, within specified days from start of work or otherwise decided jointly with Construction Manager, BHEL. Regarding qualification & experience of each of following categories of manpower, successful bidder shall take prior approval of Construction Manager, BHEL, whose decision shall be final & binding regarding acceptance of any person. Details refer to annexure-IX.	
	Area	Quantity, deployment schedule
14.4.2.1	Site Incharge	1 no (To be deputed from the date of site mobilization.)
14.4.2.2	Qualified safety officer (Graduate + Diploma in Industrial Safety).	1 nos. (Minimum) per unit
14.4.2.3	Site engineer/Supervisor (Mechanical)	3 nos. (Minimum) per unit
14.4.2.4	Experts of boiler area(pr parts & Burner) to be deployed by the contractor for complete duration of contract till the completion of e&c of combustion modification system	1 No for 35 days in each unit. (Expert to be deputed as per intimation of BHEL)
14.4.2.5	Site engineer/Supervisor (Electrical/C&I)	1 no.(Minimum) per unit
14.4.2.6	Quality engineer /Supervisor	1 no. (Minimum) per unit
14.4.2.7	Material Management Supervisor	1 no (for three units)

14.4.3	Engineer/ supervisor for other functions like store & purchase, material management, planning, FIN, administration etc are to be provided as per site requirement and not referred above.
14.4.4	In the event of failure of the successful bidder to provide necessary manpower indicated above as per requirement, BHEL reserve the right to deduct Rs 50,000 per man-month for engineer/safety officer and Rs30,000 per man-month for the supervisor/ quality officer/electrician from the date of start of work as indicated as above from RA bills. Further induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement. Further induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement.
14.4.6	In the event of failure of the successful bidder to provide necessary manpower indicated above as per requirement for a continuous period of 3 days or more, BHEL reserve the right to recover at the following rates. In the event of non-deputation of engineer/ supervisor by successful bidder, BHEL reserve the right to deduct Rs 50000 for Engr/Safety Officer & Rs 30,000 per man-month for supervisor/electrician, from the date of deputation as indicated as above from RA bills.
14.4.7	In the event of failure of the successful bidder to depute 1 no Expert for Boiler Pr Parts & Burner area for period of 35 days in each unit duly vetted by BHEL Site Engineer In charge, an amount of Rs 7000/- per man day will be deducted from RA bills.
14.4.8	BHEL reserve the right to reject or approve the list of personnel proposed by successful bidder. The persons whose bio-data have been approved by BHEL will have to be posted at site and deviation in this regard will not be permitted unless specific & reasonable justification is made.
14.4.9	In addition to above, a well experienced qualified engineer to be designated, as 'Project Coordinator', shall be deployed by successful bidder. Such engineer shall have adequate exposure on the job and shall remain fully involved in all planning activities, guidance, etc. to successful bidder's own team during complete execution period of contract.
14.4.10	Successful bidder should also submit to BHEL for approval a list of T&Ps along with their fitness certificates. The tools & tackles shall not be removed from site without written permission of BHEL.
14.4.11	Successful bidder should also submit network programs for the erection of various items. These networks shall show owner/ BHEL hold points, which have to be cleared by BHEL/ customer, or their authorized representatives before further erection can take place. These programs for the erection would clearly identify responsibilities of successful bidder & BHEL/ customer. It is the responsibility of successful bidder to get the Networks approved by BHEL within four weeks of the date of finalization of award of work/ placement of LOI.
14.5	<b>CONSTRUCTION MANAGEMENT</b>
14.5.1	Based on approved program, successful bidder shall submit program of construction/ erection/ commissioning for implementation. These programs would be amplified showing start of erection & subsequent activities and shall form the basis for site execution & detail monitoring. Three monthly rolling program with first month's program being tentative based on the site condition would be prepared based on these programs. The successful bidder shall also be involved along with owner/ BHEL to tie up detailed resources mobilization plan over the period of the contract matching with the performance targets.
14.5.2	The program would be jointly finalized by the site in-charge of successful bidder with BHEL/ customer's project coordinator as well as site-planning representative. Erection program will also identify sequential events matching financial turnover.
14.5.3	Successful bidder is liable to furnish all documentary evidences towards payment of Works Contract Tax as and when required by BHEL.
14.6	<b>PROGRESS REPORTING</b>
14.6.1	The bidder shall submit daily, weekly and monthly progress reports for work force, materials reports, consumables (gases/ electrodes) report and other reports as per pro-forma considered necessary by the BHEL. In case of any failure on contractor's part to comply with this, BHEL may at its discretion, consider to withhold part payment against their RA bills.
14.6.2	The progress report shall be in line with project L2 schedule and indicate the items to be erected and actual erected as per BHEL agreed format. A sample format is attached for your reference, however, it may be finalised at site.
14.6.3	The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged.
14.6.4	Weekly progress review meetings will be held at site during which actual progress during the week vis-

	à-vis scheduled program shall be discussed or actions to be taken for achieving targets. For discussions, the contractor shall present program of subsequent week. The contractor shall constantly update/revise his work program to meet the overall requirement.
14.6.5	Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of bidder will be held once in a month at Kolkata/site. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.
15.0	<b>LIQUIDATED DAMAGE</b>
15.1	If the successful bidder fail to complete entire scope within completion period, for reasons attributable to them, BHEL shall have the right to recover as liquidated damages (LD) a sum INR 44,525 for each day of delay for each unit.
15.2	If the successful bidder fail to complete the stipulated work within shutdown period, for reasons attributable to them, BHEL shall have the right to recover as liquidated damages (LD) a sum INR 44,525 for each day of extension in Shut Down of each unit.
15.3	The total liability for delay shall not in any case exceed 5 % (Five percent) of the contract price, including taxes, duties, etc. Contract price for this purpose, shall be the final executed value exclusive of ORC, extra work executed, supplementary/ additional items and PVC.
15.4	BHEL shall deduct aforesaid amounts from any money due or which may become due to the successful bidder and/ or recover from the bank guarantees/ security deposit of the successful bidder. To be entitled to impose such compensation/ penalty/ recovery, BHEL will not be required to prove that they have incurred such amount as actual damage.
15.5	BHEL reserve the right to complete the job through other resource at the risk & cost of successful bidder as per tender provision, with/without cancelling the order/ contract.
15.6	BHEL reserve the right to cancel the order/ contract or a portion thereof for the work not so completed at the risk & cost of the successful bidder and the successful bidder shall be liable to BHEL for any excess costs thereof.
15.7	The successful bidder shall continue with performance of the order/ contract under all circumstances, to the extent not cancelled.
15.8	Where action is taken as per above, the successful bidder shall be liable for any loss, which BHEL may sustain on that account. The successful bidder shall not be entitled to any gain on such action and the manner & the method of such purchase shall be at the discretion of BHEL. It shall not be obligatory on the part of BHEL to serve a notice of such completion, through other resource, on successful bidder.
15.9	In case of LD recovery, the applicable GST shall also be recovered from vendor. Other provision shall be as per the GCC.
16.0	<b>HEALTH, SAFETY &amp; ENVIRONMENT</b>
16.1	As per BHEL HSE Plan doc no. HSEP:14-ER, dtd. 25/04/19.
17.0	<b>SPECIFIC REQUIREMENTS FOR ISO 9002</b>
17.1	Bidders shall ensure that all their staff/ employees are exposed to periodical training programmes conducted by qualified agencies/ personnel on ISO-9002 Standards.
17.2	Bidder shall ensure that the quality is maintained in all the works connected with this contract at all stages of the requirement of BHEL.
17.3	Bidder shall ensure that all Inspection, measuring and testing equipment that are used, whether owned by bidders or used on loan, are calibrated by the authorized agencies and valid calibration certificate will be available with them for verification by BHEL. A list of such instruments possessed by bidder at site with its calibration status is to be submitted to BHEL engineer for control.
17.4	Bidder shall ensure that fitness certificate of the tools & plants, that are in use, whether owned by bidder or issued on loan, are tested by authorised agency & valid fitness certificate are available for verification by BHEL.
17.5	Bidders shall arrange for the inspection of the works at various stages as required by BHEL. Bidders shall take immediate corrective action for the non-conformances if any, observed and pointed out by BHEL.
18.0	<b>LAND</b>
18.1	Land will be provided free of cost by BHEL to the extent available/ considered necessary by BHEL to the successful bidder for their office, store, within plant premises. Availability of land within plant

	boundary is very limited and successful bidder have to plan & use existing land considering use of land by other civil/ mechanical/ electrical successful bidders and storage of plant machineries & materials. The existing land shall be shared by all agencies.
18.2	The successful bidder shall arrange at his own cost cleaning and grading of area allotted, construction of their temporary office, stores, godown, fabrication yards etc. and also the watch & ward, etc.
18.3	On completion of work, all the temporary buildings, structures, pipelines, cables, etc. shall be dismantled & leveled and debris shall be removed as per instruction of BHEL by the successful bidder at their cost. In the event of failure to do so, the same will be removed and expenditure thereof will be recovered from successful bidder. Decision of BHEL in this regard shall be final & binding. However, the scope of dismantling & leveling the area is limited only to the successful bidder's site office, yard and other spaces occupied by successful bidder.
18.4	The bidder, however, may make a note that only limited space is available at site and it shall be amicably used by all the vendors available at site.
19.0	<b>WATER</b>
19.1	BHEL will provide single point supply for construction water inside the project premises for office free of cost.
19.2	Further necessary network for construction water system shall be done by the bidder at his own cost.
19.3	Contractor should arrange for water for labour colony of their own.
19.4	BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of water supply and the contractor shall claim no compensation for delay in work for such interruption. Contractor may make standby arrangement for water at their own cost.
19.5	Contractor will have to arrange for storage of water to meet the day-to-day requirement.
19.6	The availability of water (construction) may be limited. Contractor shall ensure that no water is wasted. In this regard the contractor shall take all necessary measure towards preservation of water.
19.7	Contractor to arrange drinking water at its own cost.
20.0	<b>ELECTRICITY</b>
20.1	BHEL shall provide construction power on chargeable basis at 415V level at one point. Contractor has to make their own distribution arrangement to draw electricity by arranging all required items e.g power cable, construction cable, ELCB,MCCB, JB's, Switch Borads etc to be arranged by vendor at his own cost.
20.2	The bidder shall have to provide earth leakage circuit breaker at each point wherever human operated electrical drives/ T&Ps are deployed.
20.3	The power supply will be from the available grid. BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of power supply/ variation in voltage level and no compensation for delay in work can be claimed by the contractor due to such non-supply on the grounds of idle labour, machinery or any other grounds.
20.4	Bidder will have to arrange sufficient illumination at their own work areas.
20.5	The contractor should ensure that the work in critical areas is not held up in the event of power breakdown. In the event of breakdown in the electric supply, if the progress of work is hampered, it will be the responsibility of the contractor to step up the progress of work after restoration of electric supply so that overall progress of work is not affected.
20.6	The contractor shall have to make arrangement at their own cost for illumination that will be required in the working area for execution of the work & safety of workmen.
20.7	Contractor shall make arrangement of electricity of their own for labour colony.If the same is provided by customer, it will be chargeable.
21.0	<b>CONSTRUCTION OF TEMPORARY OFFICE, BIDDER'S OWN STORES ETC</b>
	The contractor shall arrange at their own cost -cleaning of area allotted, construction of his temporary office, his own stores, etc and also the watch & ward of all the above. Materials required for the same shall be arranged by contractor at their own cost.
22.0	<b>CONSUMABLE</b>
22.1	All consumables, like gas, electrodes, chemicals, lubricants etc required for the scope of work, shall be arranged by the contractor at his cost unless otherwise specifically mentioned in the contract.
22.2	All consumables to be used for the job shall have to be approved by BHEL/ customer prior to use.
22.3	In the event of failure of contractor to bring necessary and sufficient consumables, BHEL may arrange for the same at the risk & cost of the contractor. The entire cost towards this along-with overhead shall

	be paid by the contractor or deducted from the contractor's bills.
23.0	<b>TEST CERTIFICATE FOR T&amp;P</b> All T&P, lifting tackles and pulling devices to be deployed by the contractor must bear valid/ latest test certificates for their suitability, and the documents shall be preserved at site & copy to be submitted to BHEL.
24.0	<b>MMD</b> The contractor shall ensure deployment of reliable & calibrated instrument, measuring and test equipment (MMD). The MMD shall have test calibration certificate from authorized/ Govt approved agencies. The contractor shall also keep provision of alternate engagement for such MMD so that the work does not suffer when a particular MMD is sent for calibration. Re-testing/ re-calibration shall also be arranged by the contractor at their own cost at regular interval during the period of use as advised by BHEL. Refer Annex-V of TCC for Tentative list of MMD..
25.0	<b>ISSUE OF T&amp;P BY BHEL</b>
25.1	<b>NIL</b>
26.0	<b>TOOLS &amp; PLANTS (TO BE PROVIDED BY CONTRACTOR)</b>
26.1	Tentative list of tools & plants to be deployed by bidder is furnished in the tender. It may be noted that the list is not exhaustive and is only for general guidance. The contractor is required to provide all necessary T&P measuring (calibrated) instruments & handing equipments for timely completion of total work as per contract. In case of project requirement, some activities may have to pre-pone. In such cases the contractor may have to deploy additional T&P. Quoted rate shall be inclusive of such requirements. Refer Annex-V of TCC for tentative list of T&P.
26.2	In the event of any failure of the part of contractor, BHEL may at his discretion also terminate the contract on this ground and take out any or whole amount of the contract from the scope of contractor. In the event of failure of contractor to deploy necessary and sufficient T&P/ MMDs, BHEL will be at liberty to arrange the same at the risk & cost of contractor including transportation cost of same from any of BHEL site/ other agency & charges as applicable shall be deducted from contractor's RA bill. Decision of BHEL in this regard will be final & binding on contractor.
26.3	T&P shown in the list of tender are minimum requirement. Further requirement will be reviewed time to time at site and vendors will provide additional T&P/ equipments to ensure completion of entire work within schedule time without any financial implication to BHEL. Contractor will give advance intimation & certification regarding capacity etc prior to dispatch of heavy equipment.
26.4	For balance T&P as per above list and any other Item required for carrying out the job, no separate payment shall be made and deployment of same will be within quoted rate.
26.5	In case of non-deployment within the period indicated, BHEL reserves the right to arrange the same at the vendor's risk & cost or suitable recoveries will be made from RA bills at site.
26.6	All T&P and all MMDs, which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by the contractor at his own cost in working condition.
26.7	In the event of non mobilisation of any T&P by the successful bidder and as a result progress of work is suffered, BHEL reserve the right to deduct suitable amount from the dues of contractor. BHEL's decision in this regard shall be final & binding on contractor.
26.8	It is not obligatory on the part of BHEL to provide any tools and tackles or other materials other than those specifically agreed to do so by BHEL. However, depending upon the availability, BHE's handling equipment and other plants may be made available to the contractor free of cost, subject to the conditions laid down by BHEL from time to time. Unless paid in advance, such hire charges, if applicable shall be recovered from contractor's bill /security deposit or any other payment in one installment.
27.0	<b>FACILITIES TO BE PROVIDED BY THE SUCCESSFUL BIDDER</b>
27.1	All tools and tackles, machinery, equipment, instruments required for the work have to be arranged by the successful bidder including its transportation before and after work and including storage, insurance etc.
27.2	The successful bidder shall provide all required tools and plants, inspection, measuring and test equipment and handling & transportation equipment for the scope of work covered under these specifications. Some of the major T&Ps to be necessarily provided by the successful bidder is listed in relevant appendix of this tender. BHEL will provide the services of their T&Ps listed vide appendix-II,

	free of charge, on sharing basis.
27.3	All tools and tackles to be deployed by the successful bidder for the work shall have the prior approval of BHEL engineer with regard to brand, quality and specification.
27.4	Successful bidder shall provide all the necessary scaffolding(except for 1 St Pass furnace inside) materials, temporary structures, as may be required and necessary safety devices etc.
27.5	Successful bidder's responsibilities with regard to operator, fuel, lubricants and daily upkeep of T & Ps provided by BHEL is further detailed in relevant section.
27.6	Timely deployment of adequate quantity of T&P is the responsibility of the successful bidder. The successful bidder shall be prepared to augment the T & P at short notice to match the planned program and to achieve the milestones.
27.7	Successful bidder shall maintain and operate his tools and plants in such a way that major breakdowns are avoided. In the event of major breakdown, successful bidder shall make alternative arrangements expeditiously so that the progress of work is not hampered.
28.0	<b>RESPONSIBILITIES WITH REGARD TO EMPLOYMENT OF LABOUR, ETC</b>
28.1	Successful bidder shall also comply with the requirements of local authorities/ project authorities calling for police verification of antecedents of the workmen, staff, etc.
28.2	BHEL/ customer may insist for witnessing the regular payment to the labour. They may also like to verify the relevant records for compliance with statutory requirements. Successful bidder shall enable such facilities to BHEL / Customer.
28.3	It is the responsibility of the successful bidder to arrange gate pass for all his employees, T & P etc. for entering the project premises. Necessary coordination with customer officials is the responsibility of the successful bidder. Successful bidder to follow all the procedures laid down by the customer for making gate passes. Where permitted, by customer/ BHEL, to work beyond normal working hours, the successful bidder shall arrange necessary work permits for working beyond normal working hours.
28.4	If at any time during the execution of work, it is noticed that the work is suffering on account of non-availability/shortfall in provision of resources from the successful bidder's side BHEL will make suitable alternate arrangements at the risk and cost of successful bidder. The expenditure incurred with overheads thereby shall be recovered from the successful bidder.
28.5	The successful bidder shall deploy all the skilled/semiskilled/ unskilled labour including highly skilled workmen etc. These workmen should have previous experience on similar job. They shall hold valid certificates wherever necessary. BHEL reserves the right to insist on removal of any employee of the successful bidder at any time if he is found to be unsuitable and the successful bidder shall forthwith remove him. Successful bidder should furnish a tentative deployment plan of his manpower as required in GCC. Also the actual deployment will be so as to satisfy the erection and commissioning targets set by BHEL.
28.6	It is the responsibility of the successful bidder to engage his workmen in shifts and or on overtime basis for achieving the targets set by BHEL. This target may be set to suit BHEL's commitments to its customer or to advance date of completion of events or due to other reasons. The decision of BHEL in regard to set the erection and commissioning targets will be final and binding on the successful bidder.
28.7	Successful bidder shall deploy only qualified and experienced engineers/ supervisors. They shall have professional approach in executing the work.
28.8	The successful bidder's supervisory staff shall execute the work in the most professional manner in the stipulated time. Accuracy of work and aesthetic finish are essential part of this contract. They shall be responsible to ensure that the assembly and workmanship conform to dimensions and tolerances given in the drawings/instructions given by BHEL engineer from time to time.
28.9	The supervisory staff employed by the successful bidder shall ensure proper outturn of work and discipline on the part of the labour put on the job by the successful bidder. Also in general they should see that the works are carried out in a safe and proper manner and in coordination with other labour and staff employed directly by BHEL or other successful bidders of BHEL or BHEL's client.
28.10	If at any time, it is found that the successful bidder is not in a position to deploy the required engineers/supervisors/workmen due to any reason, BHEL shall have the option to make alternate arrangements at the successful bidder's risk and cost.
29.0	<b>RECONCILIATION OF BHEL ISSUED MATERIALS</b>
29.1	Successful bidder shall submit a reconciliation statement of material s issued to them, once in two months. The same may be submitted along with RA bill.

29.2	Successful bidder shall properly account for the material issued to them as specified herein to the satisfaction of BHEL certifying that the balance material are available with successful bidder's custody at site.
30.0	<b>INSURANCE</b>
30.1	It is the entire responsibility of successful bidder to insure their workmen against accident & injury while at work, as required by relevant rules and to pay compensation, if any, to their workmen as per workmen's compensation act. The successful bidder shall also insure their staff against accident/injury.
30.2	The successful bidder shall take insurance cover for all materials, tools & plants, etc, required to be provided & deployed for the job by them.
30.3	The insurance coverage have to be taken prior to start of work and successful bidder shall make the policy available to Construction Manager, BHEL for necessary verification before start of work. However, irrespective of such verification/ acceptance, sole responsibility to maintain adequate insurance cover at all times during the period of contract shall lie with successful bidder. Regarding aforesaid insurance cover, successful bidder shall directly deal with the insurance company for all matters regarding the insurance in their scope.
30.4	BHEL/ customer shall arrange comprehensive insurance policy for total supply & services for main equipment/ system covering transit risks & loss, destruction or damage during handling at site, storage, civil work, erection, testing, commissioning, etc up to trial operation/ completion of unit(s) including theft, sabotage, fire, lightning and other natural calamities.
30.5	Successful bidder shall timely intimate discrepancy during contract operation, to the underwriter. Name of the underwriter and Policy No shall be intimated in due course of time.
30.6	Successful bidder shall be responsible for timely submission of loss/ damage/ theft for the materials under vendors custody to the underwriter, assistance in lodging & settlement of claim for losses/ damages/ theft/ lodging of FIR with police. Any consequential loss arising out of non-compliance of this stipulation will be borne by successful bidder.
30.7	Successful bidder will take necessary precautions/ due care to protect the material at project site, while in their custody from any damage/ loss till the same is handed over to BHEL/ customer at project site. For lodging/ processing of insurance claim, the successful bidder will submit necessary documents. BHEL reserve the right to recover the loss from the successful bidder in case the damage/ loss is due to negligence/ carelessness on the part of the successful bidder. In case of theft of material under successful bidder's custody, erected & commisioned items upto handing over to customer, the same shall be reported to police by the successful bidder immediately and copy of FIR and subsequently police investigation report shall be submitted to BHEL/ customer for taking up with insurance. However this will not relieve the successful bidder of their contractual obligation for the materials in their custody.
30.8	In case the damage/ loss/ theft of materials are attributable to negligence/ failure in discharging the duties and obligations of the successful bidder, the expenses incurred for repair/ replacement of such components in excess of the amount realized from the underwriters, limited to Normal Excess (Deductible Franchise) shall be recovered from the successful bidder.
30.9	In case the claim is summarily rejected by the underwriters due to WILFUL NEGLIGENCE of successful bidder, the entire cost of repair/replacement will be recovered from successful bidder.
30.10	It will be responsibility of successful bidder to replenish the items lost/ damaged in time without hampering the schedule of work and without waiting for settlement of insurance claim. Amount received from the underwriters on settlement of insurance claim shall be passed on to successful bidder as and when available.
30.11	Other conditions of Insurance shall be as per relevant clause of GCC.
31.0	<b>SECURITY DEPOSIT &amp; PERFORMANCE BOND</b>
31.1	Security deposit shall be applicable as per relevant clause of GCC (Volume-IB).
31.2	Performance bond is not applicable for the tender.
31.3	<b>RELEASE OF SD BG AND FINAL BILL</b>
	In addition to other provisions of tender regarding release of SD and final bill, following provisions shall also be governing to this tender.
31.3.1	For SD BG- further extension beyond date of acceptance of final bill will not be enforced if the following is fulfilled.

31.3.1.1	Successful bidder discharges their responsibility in r/o of submission of final bill along with absolute 'No Demand Certificate' and other documents as detailed below to the satisfaction of BHEL
31.3.1.2	Joint protocol of set of documents as submitted as detailed in below is certified by site & successful bidder's representative.
31.3.1.3	There is no negative value of the final bill (after release of SD BG) - site to certify the same before release of SD BG.
31.3.1.4	Successful bidder has returned the property belonging to BHEL - site to certify the same before release of SD BG.
31.3.1.5	Successful bidder has submitted joint protocol against 'Delay analysis', if applicable for delayed execution of job.
31.3.2	List of documents to be submitted & jointly protocolled indicating acceptance of final bill by BHEL.
31.3.2.1	Final bill.
31.3.2.2	Measurement for final bill signed, jointly signed by BHEL & successful bidder's representative.
31.3.2.3	Statement having cumulative joint measurement for the contract, jointly signed by BHEL & successful bidder's representative.
31.3.2.4	Claim by successful bidder for refund of security deposit.
31.3.2.5	Jointly signed material reconciliation statement.
31.3.2.6	Statement of payment received from BHEL – Bill wise (Including RA/ PVC/ ORC/ rate revision/ extra work).
31.3.2.7	No claim certificate by successful bidder.
31.3.2.8	Clearance certificates wherever applicable, viz clearance certificates from customer, various statutory authorities, like Labour Department, PF Authorities, Commercial Department, etc.
31.3.2.9	Notarized Indemnity Bond as per prescribed format.
32.0	<b>COMPLETION PERIOD</b>
32.1	The entire work of Erection, Testing and Commissioning, Material Handling up to handing over shall be completed within a period of 18 months (Eighteen months) from the date of start of work as certified by BHEL Site Construction Manager.
32.2	The successful bidder shall arrange to mobilize and start the work within 15 days from the date of written notice/intimation by BHEL.
32.3	Material supply at site is expected from FEB'2020.
32.4	<p>Dismantling, Erection, Re-erection, Modification and Commissioning of combustion modification work (For Each Unit)</p> <p>Pre shut down period is tentatively 25 Days/Unit, Shutdown Period of 35 Days/Unit, Testing/Commissioning Period of 60 Days/Unit.</p> <p>It is expected that shutdown for U#5, U#6 &amp; U#7 will be given separately &amp; work shall be carried out during different periods for all three units. In such case following may be noted:</p> <p>This may require contractor to mobilize &amp; demobilize the site more than once. (If done, no additional charges for mob de-mob shall be paid). In such case after completion of the work for one unit, contractor shall complete all contractual obligations viz, material reconciliation, HR clearances, Labor clearances, other statutory clearance &amp; submit the final bill etc., w.r.t. the completed unit</p> <p>Tentative Shutdown schedule of First Unit (U#5) is expected from July 2020, Shutdown of 2nd Unit(U#6) from December 2020 &amp; 3rd Unit(U#7) from April'2021.</p>
32.5	The actual date of contractual start of work will be certified by Construction Manager, BHEL after adequate mobilization of manpower, T&P by successful bidder. This certificate date will be deemed as start of work at site for purpose of the contract time schedule.
32.6	The work under the scope of contract will be deemed to be completed in all respects only when all the components are erected and trial runs, testing and commissioning of all individual equipment including trial operations with full load are conducted and handed over. The decision of BHEL shall be final and binding on the successful bidder.
33.0	<b>CONSTRUCTION SCHEDULE</b>
33.1	Entire work shall be carried out in accordance with the broad schedule of this package as furnished

	below, within the stipulated completion period. This schedule will undergo review and based on progress vis-à-vis project requirement, successful bidder may have to submit revised schedule for approval of BHEL.
33.2	Total completion schedule for this work in all respect is 18 Months from start of work. For detail schedule refer Annexure- VIII
33.3	Periodic progress reviews on the entire activities of execution in respect of supply & works in scope of successful bidder will be held once in a month at Kolkata/ site. These meetings will be attended by reasonably higher officials of the successful bidder and will be used as a forum for discussing all areas where progress needs to be speeded up. The successful bidder shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.
34.0	<b>CERTIFICATE TOWARDS COMPLETION</b>
	The work under the scope of the successful bidder shall be deemed to have been completed in all respects only when so certified by BHEL/ owner. The decision of BHEL in this regard shall be final and binding on the successful bidder.
35.0	<b>EXTENSION OF TIME FOR COMPLETION</b>
35.1	If the completion of work as detailed in the scope of work gets delayed beyond the contract/ completion period, the successful bidder shall request for an extension of the contract and BHEL at its discretion may extend the contract.
35.2	Based on the reviews jointly signed, the works balance at the end of original contract period less the backlog attributable to the successful bidder shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', the successful bidder is bound to complete the portion of backlog attributable to the successful bidder. Any further 'Time extension' or 'Time extensions' at the end of the previous extension shall be worked out similarly.
35.3	However, if any 'Time extension' is granted to successful bidder to facilitate continuation of work & completion of contract, due to backlog attributable to successful bidder alone, then it shall be without prejudice to the rights of BHEL to impose penalty/ LD for the delays attributable to successful bidder, in addition to any other actions BHEL may take at the risk and cost of successful bidder.
35.4	A joint programme shall be drawn for the balance amount of work to be completed during the period of 'Time Extension', along with matching resources to be deployed by the successful bidder as per specified format. Review of the programme and record of shortfall shall be done.
35.5	During the period of 'Time extension', successful bidder shall maintain their resources as per mutually agreed program
35.6	At the end of total work completion as certified by BHEL engineer, and upon analysis of the total delay, the portion of time extensions attributable to (i) Successful bidder, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to be exhausted in the same order. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed/ levied for the portion of time extensions attributable to successful bidder and recoverable from the dues payable to the successful bidder.
36.0	<b>MOBILIZATION ADVANCE/ INTEREST BEARING RECOVERABLE ADVANCE</b>
	Not applicable for this tender.
37.0	<b>OVER RUN CHARGES</b>
	Not applicable for this tender
38.0	<b>PRICE VARIATION COMPENSATION (PVC)/ ESCALATION</b>
	PVC Applicable as per relevant provision of GCC.
39.0	<b>TAXES &amp; DUTIES, ETC.</b>
39.1	All taxes excluding GST with applicable cess & BOCW Cess (mentioned elsewhere in the Tender) but including, Charges, Royalties, , any State or Central Levy and other Taxes for materials if any obtained for the work and for the execution of the contract shall be borne by the bidder and shall not be payable extra by BHEL.
39.2	Any increase in the above at any stage during execution including extension of the contract, if any, shall have to be borne by the contractor. Quoted/ accepted rates/ price shall be inclusive of all such requirements.

39.3	GST with applicable Cess, legally leviable & payable by the successful bidder as per GST Law, shall be paid extra by BHEL. Hence, Bidder shall not include GST with applicable Cess in their quoted price.
39.4	The successful bidder shall furnish proof of GST registration with GSTN Portal covering the services under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by the successful bidder on BHEL for this project/ work.
39.5	Since GST on output will be paid by BHEL separately as enumerated above, bidder's quoted rates/ price should be after considering the Input Credit under GST law at their end.
39.6	TDS under Income Tax shall be deducted at prevailing rates on gross invoice value from the running bills unless exemption certificate from the appropriate authority/ authorities is furnished.
39.7	TDS under GST shall be deducted at applicable rates on gross invoice value from the running bills.
39.8	<p>Bidder shall note that the GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act &amp; Rules referred there under) wherein the 'Bill To' details shall be as per following.</p> <p>BHEL GSTN – 10AAACB4146P1ZU</p> <p>NAME - BHARAT HEAVY ELECTRICALS LIMITED</p> <p>ADDRESS – BHEL SITE OFFICE (NOx MITIGATION JOB), KAHALGAON SUPER THERMAL POWER STATION, STAGE-II (3X500 MW), NTPC LTD., DISTRICT-BHAGALPUR, BIHAR, INDIA</p>
39.9	<p>Bidder to intimate immediately on the day of removal of Goods(in case of any supply of goods) to BHEL along with all relevant details and a scanned copy of Tax Invoice through following communication mode for enabling BHEL to meet its GST related compliances</p> <p>Portal Address – Shall be intimated later.</p> <p>And</p> <p>Email Address – Shall be intimated later.</p> <p>In case of delay in submission of the abovementioned documents on the date of dispatch, BHEL may incur penalty /interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from the successful bidder, if such delay is attributable to the bidder.</p>
39.10	In case of raising any Supplementary Tax Invoice (Debit / Credit Note) Bidder shall issue the same containing all the details as referred to in Section 34 read with Section 31 of GST Act & Rules referred there under.
39.11	Bidder shall Comply with the Time limit prescribed under the GST Law and rules thereof for raising of the tax invoice. If any supply of goods is applicable, Bidder shall also ensure prompt delivery of Goods after dispatch.
39.12	Bidder shall note that in case GST credit is delayed/ denied to BHEL due to delayed / non receipt of goods and /or tax invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons attributable to the bidder, GST amount shall be recoverable from the bidder along with interest levied / leviable on BHEL, as the case may be.
39.13	Bidder shall upload the Invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act. Bidder shall note that in case of delay in declaring such invoice in your return and GST credit availed by BHEL is denied or reversed subsequently as per GST Law , GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from the bidder along with interest levied / leviable on BHEL.
39.14	<p><b>Way Bill:</b> Successful Bidder shall arrange way bill / e-waybill for any transfer of goods for the execution of the contract.</p> <p>The Bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants &amp; machinery at site for execution of the works under this contract, Road Permit/ Way Bill, if required, shall be arranged by the contractor and BHEL will not supply any Road Permit/ Way Bill for this purpose.</p>

39.15	Any new taxes & duties, if imposed subsequent to the due date of offer submission as per NIT & TCN, by statutory authority during contract period (including extensions for which delay is not attributable to the bidder), shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL. However, bidder shall obtain prior approval from BHEL before depositing any such new taxes and duties. Benefits and/or abolition of all existing taxes must be passed on to BHEL against new taxes, if any, introduced at a later date.	
40.0	TERMS OF PAYMENTS (PAYMENT SHALL BE RELEASED UNIT WISE)	
	The quoted / awarded amount shall be released progressively on pro-rata basis as per the following for each unit:-	
	STAGES OF PAYMENT	PAYMENT BREAK UP IN %
40.1	PAYMENT BREAK UP FOR SL NO.A OF PRICE SCHEDULE (VOL-III, SCH-2)	
40.1.1	Dismantling of Mechanical, Electrical & C&I items of each unit.e.g Pr Parts, Structure, Instruments, Electrical/C&I items and disposal of scraps of each unit, Up keepment/storage of items which will be re-used & Re-Erection/re-use/modification, alignment, welding & commissioning of old dismantled items	41%
40.1.2	Disposal of Scrap Items & Upkeepment of Items to be re-used	10%
40.1.3	Re-Erection/Re-use/Modification of Mechanical, Electrical & C&I items of each unit	41%
40.1.4	Supply & Application of Paints for re-erected/re-used/modified items	3%
40.1.5	System Commissioning & Assistance for PG Test	5%
	SUB TOTAL	100%
40.2	PAYMENT BREAK UP FOR SL NO.B OF PRICE SCHEDULE (VOL-III, SCH-2)	
40.2.1	Pre-Assy & Erection	45%
40.2.2	Alignment & welding,application of insulation	36%
40.2.3	Hydro Test of Pr Parts	4%
40.2.4	Air Leak Test	5%
40.2.4	Supply & Application of Paints	3%
40.2.5	System Commissioning & Assistance for PG Test	5%
40.2.6	House Keeping, Scrap Disposal	2%
	SUB TOTAL	100%
40.3	PAYMENT BREAK-UP FOR SL NO.C OF PRICE SCHEDULE (VOL-III, SCH-2)	
40.3.1	On pro-rata basis progressively as & when erection work/ cable laying/cable dressing/Cable tagging/termination/Instrument fixing/cable tray/ferruling/house keeping/diposal of scrap is complete as per BHEL drawing & instructions	90%
40.3.2	Commissioning of Instruments/system	10%
	SUB TOTAL	100%
40.4	PAYMENT BREAK-UP FOR SL NO.D.1 OF PRICE SCHEDULE (VOL-III, SCH-2)	
40.4.1	Receipt/ taking delivery of material at plant, unloading from truck/ trailer, re-loading/ shifting to site store/ storage yard/ work site, verification, stacking, storage, etc, including providing material management service and arrange suitable watch and ward facility round the clock basis along with store supervisor as per tender & as directed by BHEL engineer, for various item/ material).	40%
40.4.2	Updation of store documents (both hard & soft) of above.	10%
40.4.3	Proper stacking, as per direction of BHEL	20%
40.4.4	Verification, as required, as per direction of BHEL	20%
40.4.5	Material Re-conciliation	10%
	SUB TOTAL	100%

40.5	PAYMENT BREAK UP FOR SL NO.D.2 OF PRICE SCHEDULE (VOL-III, SCH-2)	
40.5.1	Existing/old materials shifting/re stacking inside cover store/semi covered store/material yard	100%
40.6	PAYMENT FOR SL NO.E OF PRICE SCHEDULE (VOL-III, SCH-2). This item may not be excuted in case the same is carried out by customer during execution, in that case payment shall not be made for this.	
40.6.1	Scaffolding Materials receipt & shifting/transporatation from NTPC store/yard to site	60%
40.6.2	Erection of Scaffolding.	30%
40.6.3	Dismantling of Scaffolding & handing over in customer store/yard	10%
	SUB TOTAL	100%
40.7	PAYMENT FOR SL NO.F OF PRICE SCHEDULE (VOL-III, SCH-2). This item may not be excuted in case the same is supplied by customer during execution, in that case payment shall not be made for this.	
40.7.1	Arrangement of Cup lok scaffolding along with steel planks, hand rails, stair case at site for each unit	100%
i	Payment shall be made on the basis of progress of work on pro-rata basis as certified by BHEL-Engineer as per above break up	
ii	All payments shall be subject to statutory deduction as per rule.	
iii	Necessary documents as specified in GCC shall be submitted with bill.	
iii	All payment shall be made by Electronic Fund Transfer and necessary Bank Details shall be furnished by the sub-contractor.	
iv	Successful bidder shall submit RA bill once in a month at the end of each month as per billing break-up of the tender. The measurement will be taken by BHEL engineer as per relevant clause of GCC and certify regarding the actual work executed in the measurement book and bills for work.	
v	Progressive payment shall be made by BHEL against successful bidder's RA bill, complete & correct in all respects accompanied by BHEL engineer's certified/ measurement sheet, jointly signed; requisite statutory certificates, certified by BHEL; within 60 days of submission of the bill. The bill shall also accompany monthly progress report as per clause no. 14.6 of this TCC.	
vi	The RA bill, complete in all respects accompanied by BHEL engineer's certificate/ jointly signed measurement sheet will be paid, as indicated elsewhere, subject to its completeness & correctness in all respects. The measurement will be taken by BHEL engineer as per relevant clause of GCC and certify regarding the actual work executed in the measurement book and bills for work. All admissible recoveries/ adjustments etc shall be made from the interim payable amount of each RA bill on completion of item of work. Contractor shall make his own arrangement for making payment of impending labour wages and other dues in the meanwhile.	
vii.a.	Out of above break up for payment, 5% will be retained from each bill which will be released on completion of guarantee period and after confirmation of full GST credit to BHEL. However, this 5 %, retained from each RA bill, may be released against submission of a separate bank guarantee as per Performance Bank Guarantee format, to be kept valid till guarantee period, subject to (i) Receipt of certificate that all works are completed in all respects; (ii) Reconciliation of materials/ T&P/ MMD; (iii) Completion of final bill formalities and (iv) Handing over to BHEL/ customer. The submission of bank guarantee towards above is separate and the bank guarantee towards security deposit cannot be utilized for this purpose. The security deposit / Retention amount will be refunded as per GCC.	
vii.b.	Out of above break up for payment, 2.5 % of gross bill amount shall be paid in the following manner on certification by BHEL engineer after compliance of each of following activity in each month. In case of non-fulfillment of respective activity by successful bidder in each month, no payment shall be made by BHEL against corresponding activity and no claim of successful bidder, at a later date, whatsoever, in this regard will be entertained by BHEL.	
vii.c	0.5 % shall be paid on compliance of house-keeping of successful bidder's working area and store/ office areas.	
vii.d	0.5 % shall be paid on compliance of general illumination of successful bidder's working area and stores, office area.	
vii.e	0.5 % shall be paid on compliance of applicable OHSAS requirement as per guidelines of BHEL and as specified in the tender.	

vii.f	0.75 % shall be paid on compliance of applicable safety requirement as per guidelines of BHEL and as specified in the tender.
vii.g	0.25 % shall be paid on compliance of applicable security requirement as per guidelines of BHEL.
viii.	Each RA bill shall accompany with latest agreed & jointly signed L-3/ construction schedule, as enumerated in this tender.
ix.	All admissible recovery/ adjustment, etc. shall be made from interim payable amount.
x	<b>GST shall be released to the vendor upon compliance of following:-</b>
x.a	Vendor declaring such Invoice in his GSTR-1
x.b	Material Receipt Certificate (MRC) / Engineering Protocol by BHEL
x.c	Confirmation of payment of GST thereon by vendor on GSTN Portal
x.d	Above is subject to receipt of goods / service and tax invoice thereof along with vendor declaring invoice in his return and paying GST within timeline prescribed for availing ITC by BHEL.
x.e	Last percentage payment, will be released after confirmation of full GST Credit to BHEL. Any Interest if levied thereon, for reasons elaborated in tax & duties clause of the tender and attributable to the bidder, will be recovered from the Final Payment / Retention amount.
41.0	<b>CONTRACT PRICE</b>
41.1	The bidder shall quote their rates in compliance with specification and terms & conditions of tender and strictly in accordance with prescribed Price Schedule, Volume-III.
41.2	The quantities of the various items mentioned in the BOQ cum rate schedules of items of Volume-III are approximate, based on very preliminary information and may vary to any extent or to be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of the work executed under any part of the this contract including extra items, if any, but excluding any price variation, remains within +/- 15 % (plus/minus fifteen percent) of the awarded price as per LOI / WO.
41.3	All other provisions of GCC on quantity variation shall be applicable for this tender.
42.0	<b>GUARANTEE/ WARRANTY PERIOD/DEFECT LIABILITY (UNIT WISE)</b>
42.1	Even though the work will be carried out under supervision of BHEL, the successful bidder will be responsible for the quality of workmanship, quality of materials/ items and design for which the successful bidder is responsible.
42.2	The successful bidder shall guarantee the work executed under the scope of the contract for a period of eighteen (18) months from the date of successful Completion of the Facilities (or any part thereof) or twelve (12) months from the date of Operational Acceptance of the Facilities (or any part thereof), whichever occurs first. The date of start of guarantee period is considered as certified by the engineer (i.e. on completion of total work under scope of work and/ or handing over to BHEL/ owner) and shall rectify free of cost all defects due to faulty work done, supply (if applicable) within the guarantee/warranty/defect liability period. In case the successful bidder fails to repair/ replace the defective works within the time specified by the engineer, BHEL may proceed to undertake the repairs/ replace such defective works at successful bidder's risk & cost without prejudice to any other rights and recover the same from security deposit/ other dues.
42.3	Other provision shall be as per the GCC.
43.0	<b>DELETED</b>
44.0	<b>REVISION ON ACCEPTED CONTRACT RATE</b>
	Rate revision is not applicable for this tender.
45.0	<b>EXTRA WORKS</b>
	As per GCC
46.0	<b>OTHER TERMS</b>
46.1	All other term & conditions of this specification, not mentioned above shall be governed by the pertinent provisions of GCC, Volume-IB.
47.0	<b>Terminal Points:-</b>
47.1	Instrument and service air:- at one point in Boiler area (4-6 Ksc) <ul style="list-style-type: none"> <li>Marshalling panel of NTPC DDCMIS.</li> <li>230V Single phase AC UPS and 24 DC power supply feeder from NTPC ACDB and DCDB in CER.</li> <li>Marshaling cabinet of NTPC DDCMIS in CER for input/output signals</li> </ul>

48.0	Exclusions
48.1	<ul style="list-style-type: none"> <li>• LDO oil skid</li> <li>• Existing pressure gauges in corner skid for oil and atomizing medium.</li> </ul>

**ANNEXURE-I**  
**[REF. PRICE SCHEDULE, VOL-III, SCH-2, SL. NO.A]**

**TENTATIVE WEIGHT OF ITEMS (Mechanical/ C&I/ Electrical) TO BE DISMANTLED & RE-USED/RE-ERECTED/MODIFIED/COMMISSIONED IS MENTIONED BELOW. HOWEVER ACTUAL QTY OF ITEMS TO BE DECIDED AS PER SITE CONDITION/ENGINEER I/C.**

The contractor shall carry out Dismantling, Removal, Shifting of any obstructing Pr Parts, structures, buck stay, pipe lines, cables & cable trays, boiler lighting arrangement, wall blower system at BOFA panel elevation, facilities etc. and upkeepment of the items for Re-Use/Re-Erection/Modification as per drawing/Instruction of Engr I/C.

A. Following Items to Be dismantled, preserved & to be re-used/ re-erected/ modified/ commissioned:-

**MECHANICAL ITEMS:**

- Insulation cladding, wool, refractory etc as required.
- Structure components like Platform, hand rails, floor gratings, stair cases, ladders etc of Different Elevation as required.
- Existing Wind box assembly, coal burner, Coal nozzle tip, coal piping, hangers etc.
- Misc structural items(channel, Angles, Beams etc.)
- Wall blower, soot blower, its piping as required.
- Duct, duct support, expansion below etc as required.
- Buckstay beams and its associated members like leveller guide, scalloped bar, pin etc.
- Water wall panels/tubes/ bends as required.
- Burner Nozzles (air/coal/oil).
- Coal Pipe Bends/elbows as required.
- Removal / dismantling of FIE (Fuel Inlet Elbows = 36 Nos) for all four corners at all elevation. Transporatation of FIE's to designated location as decided by BHEL/ Customer
- Removal of Oil Guns, Gun Guide Pipes, HEA Ignitor, its fittings & its guide pipes, Scanner & their guide pipes. Proper care shall be given while dismantling as these items shall be reused, Oil Gun Vice assy & Rack, Air Cooled Oil gun Assemblies, oil gun mainmtenance box, oil gun vice assy an rack.
- Burner station skid assemblies.
- Corner station piping, valves & fittings.
- Coal piping, coal pipe coouplings, supports etc( as required).
- Buckstays in the wind box and BOFA locations.
- Any other piping, supports, valves and fittings etc.
- Removal of all Coal Nozzles from coal compartment for all four corners. Replacement of Nozzle tips with new tips & inert back the nozzles to burners coal compartments.
- Instrument Air, Service Air Line as required.
- Any other mechanical items not mentioned above but required to be dismantled & re-ereted/re-used/modified for completion of the sytem, same to be carried out by vendor as per instruction of Engr I/C without any extra cost

**C&I & ELECTRICAL ITEMS :**

- 44 NOS Flame scanner Head assemblies, Cooling air piping, Scanner hoses.
- Furnace flame viewing camera/system.
- ASLD etc.
- SADC and Burner tilt power cylinders/actuators.
- Cable trays and cables, which are fouling with DE-NOX system duct panels etc.
- Existing Pressure gauges in Corner skid for oil and atomizing medium.
- Wind box to Furnace DP Transmitters and impulse piping.
- Tapping point for any Instrument in water wall.
- Field cables and Junction boxes in Boiler Operating Floor/Firing Floor/ air and flue gas path as applicable.
- Existing SADC I/P converters, 1/4" Air Filter Regulator in existing SADC signal airline, Existing SADC signal air Line pressure switches.
- Illumination items.

- Existing secondary air flow measurement element and transmitter along with cable & accessories.
- Existing corner oil skid, instruments in oil line, trip valves and control valves along with all associated cables.
- Field JBs and impulse piping.
- All existing cables between existing SADC actuators I/P, pressure switch and SADC/FSSS panel.(including field cables till local JB).
- All existing cables between existing corner oil skid, HEA ignitors, oil gun, LGM box and FSSS panel(including field cables till local JB).
- All existing Power, Control & Instrumentation cables for Soot Blowers.
- Existing instruments in air and flue gas path, associated cabling, field JB's and Impulse piping.
- Any other C&I/Electrical items not mentioned above but required to be dismantled & re-erected/re-used/modified for completion of the system, same to be carried out by vendor as per instruction of Engr I/C without any extra cost.

Note: - The above item list are tentative only. If any other item required to be dismantled for completion of De-Nox system, the same to be carried out by vendor without any extra cost.

B. Work to be done as under:-

- i) Dismantling, Removal, Shifting of any obstructing items (Mechanical, C&I, Electrical) as mentioned above for De-Nox.
- ii) Upkeep/preservation of the items for re-use, re-erection, modification, welding, alignment, laying, termination, commissioning, PG Test as per instruction of Engr I/C/Drawing as reqd.
- iii) Relaying/re-erection of Instrument air, service air, other dismantled pipe lines, lighting system, cables, cable trays, jb's etc.
- iv) Disposal of scrap to the scrap yard or as instructed by Engr I/C inside plant premises.
- v) Instrument air distribution SS tubing, fittings for SADC actuators, Corner Nozzle valves, HEA ignitors, Burner Tilt Power cylinders Power cylinders
- vi) Dismantling/Modification of existing Wind box assembly, coal burner, Coal nozzle tip, coal piping, hangers etc.
- vii) Preservation of Scanners and HEA Ignites and critical equipment which can be reused again shall be cleaned and stored in proper shed and shall be reused/ re erected/restored.
- viii) Restoration/re-erection of all removed structure, floor grills, air lines, hand rails, Re-erection of removed insulation and cladding with the help of hooks and retainer plates. Existing access openings/observation doors are to be retained. Restoring JB, cable, cable tray as and where applicable. Dismantling & Removal of scaffolding and other temporary structures & arrangements made for handling after completion of work & Transportation of removed material and other scraps generated during the work to disposal yard/handing over the same to NTPC customer. Any other alteration which is done for modification is to be restored in original position without any extra charge. If any modification of floor/ bracing is required to successfully complete this BOFA modification job which is not mention here, same has to be carried out with out any extra cost.
- ix) Existing Floor at 51.850 Mtrs, & other Elevations to be modified to clear BOFA assembly & Ducting.
- x) Modification of Existing Floors as per drawing/guidance of Engr I/C.
- xi) Existing Buckstay at El 51.00 Mtrs to be modified at corners.
- xii) Horizontal Bracings interfering with BOFA system to be modified to clear BOFA & Ducting.
- xiii) Duct Stiffeners & Insulation at existing items to be adjusted locally at site for clearance.
- xiv) All the existing features which are interfering with the proposed arrangement of BOFA are to be suitably relocated at site to the extent required.
- xv) Supply & application of paints for the re-erected/re-used/modified items.
- xvi) Fabrication of Floors/benches (where ever required)

C) Tentative quantity of work:

C.1 Approx weight to be dismantled will be 50 MT per Unit, for 3 no Units total weight to be dismantled is 150 MT (Approx).

C.2 Approx weight to be re-erected/re-used will be 30 MT per Unit, for 3 no Units total weight to be re-erected / re-used is 90 MT (Approx).

Note: Qunantity for Dismantling work & old dismantled items to be retained/re-used/modified may vary to any extent. No extra paymnet shall be made for quantity variation for C.1 & C.2 mentioned above as required to complet the NOx modification package.

**ANNEXURE-II****[REF. PRICE SCHEDULE, VOL-III, SCH-2, SL. NO.B]**

**TENTATIVE LIST OF NEWLY SUPPLIED MECHANICAL ITEMS/UNIT FOR ERECTION,  
ALIGNMENT,WELDING, TESTING, COMMISSIONING & PG TEST FOR DE-NOX SYSTEM OF BOILER  
U#5,6,7 AT NTPC KAHALGAON**

DU	PGMA	Description	Unit	DU Qty/Unit	DU Wt In Kgs/Unit
<b>A. PRESSURE PARTS</b>					
F4240106500001	06-500	BOFA PANEL (OFA-1 &OFA-3)	NO	2	3,228.960
F4240106500002	06-500	BOFA PANEL (OFA-2 &OFA-4)	NO	2	3,214.420
F4240106500003	06-500	ERECTION MATERIALS	NO	1	213.120
F4240106655001	06-655	RIFLED TUBE D51X7.1	NO	4	26.080
F4240106655002	06-655	PLATE 6 THK.	NO	4	1.160
F4240106655003	06-655	ROD D6	NO	2	0.340
F4240106655004	06-655	SEAL BOX	NO	2	57.000
F4240106655005	06-655	SCALLOPED BAR	NO	2	6.000
F4240106655006	06-655	SCALLOPED BAR	NO	2	4.400
F4240106655007	06-655	PLATE 6 THK.	NO	2	2.200
F4240108006001	08-006	WIND BOX TRUSS	NO	2	1,398.368
F4240108006002	08-006	WIND BOX TRUSS	NO	2	1,179.048
F4240108006003	08-006	PLATE 16	NO	2	232.612
F4240108006004	08-006	PLATE-12	NO	4	16.400
F4240108006005	08-006	PLATE	NO	4	35.200
F4240108006006	08-006	LINK	NO	8	79.200
F4240108006007	08-006	PIN	NO	8	10.400
F4240108006008	08-006	WASHER	NO	16	6.400
F4240108006009	08-006	PLATE	NO	2	27.200
F4240108006010	08-006	LINK	NO	8	116.800
F4240108006011	08-006	PIN	NO	8	20.000
F4240108006012	08-006	WASHER	NO	16	12.800
F4240108006013	08-006	PLATE-25	NO	4	6.800
F4240108006014	08-006	PLATE	NO	2	27.800
F4240108006015	08-006	PLATE-16	NO	2	150.720
F4240108006016	08-006	LUG	NO	120	52.800
F4240108006017	08-006	VERTICAL BUCKSTAY BEAM	NO	4	2,860.000
F4240108006018	08-006	ISA 100 X 100 X 10	NO	8	36.320
F4240108006019	08-006	ANGLE	NO	8	35.200
F4240108006020	08-006	ANGLE	NO	8	138.400
F4240108006021	08-006	T-PLATE	NO	4	54.400

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F4240108006022	08-006	LINK	NO	8	52.000		
F4240108006023	08-006	PLATE	NO	44	158.400		
F4240108006024	08-006	PLATE-16	NO	44	189.200		
F4240108006025	08-006	PLATE	NO	4	40.800		
F4240108006026	08-006	BOLT HEX GR C4.6 M20X 70	NO	16	3.728		
F4240108006027	08-006	NUT HEX GR C M20	NO	16	1.120		
F4240108006028	08-006	WASHER PNCHD A20	NO	16	0.272		
F4240108006029	08-006	PLATE-36	NO	8	13.600		
F4240108006030	08-006	HSFG BOLT & NUT M24 X 90	NO	32	19.264		
F4240108006031	08-006	WASHER M24 A (HSFG WASHER)	NO	32	1.376		
F4240108006032	08-006	PLATE-16	NO	12	5.640		
F4240108006033	08-006	PLATE-16	NO	4	1.884		
F4240108006034	08-006	PLATE-16	NO	2	23.300		
F4240108006035	08-006	PLATE-16	NO	4	35.360		
F4240108006036	08-006	SCALLOPED BAR	NO	60	72.000		
F4240108006037	08-006	PLATE-16	NO	2	26.600		
F4240108006038	08-006	PLATE-16	NO	7	124.600		
F4240108006039	08-006	SCALLOPED BAR	NO	2	6.600		
F4240108006040	08-006	LUG	NO	88	114.400		
F4240108006041	08-006	SCALLOPED BAR	NO	2	6.600		
F4240108006042	08-006	LUG	NO	8	9.968		
F4240121600001	21-600	PIPE OD 60.3 X 3.91 - SA106GRB	M	8	43.496		
F4240121992001	21-992	ER 70S-A1 GTAW ROD DIA2.4MM	KG	0.70	0.700		
<b>SUB-TOTAL WEIGHT OF PR PARTS ITEMS</b>						14201.456	
<b>B. INSULATION ITEMS</b>							
F4240132310001	32-310	PLATE - 5	NO	2	24.492		
F4240132310002	32-310	PLATE - 5	NO	4	11.020		
F4240132310003	32-310	PLATE - 5	NO	4	5.652		
F4240132310004	32-310	PLATE - 5	NO	4	4.900		
F4240132310005	32-310	PLATE - 5	NO	4	2.512		
F4240132310006	32-310	OUTER PIPE	NO	2	1.928		
F4240132310007	32-310	CAFJOINTING GRW/1 2MM OD111/ID105	NO	4	0.180		
F4240132310008	32-310	HR GLASS DIA109MM X 5MM THK	NO	4	0.800		
F4240132310009	32-310	PIPE CAP DIA 130	NO	2	9.184		
F4240132310010	32-310	INNER PIPE	NO	2	4.284		
F4240132310011	32-310	ERW TUBE NB25 MEDIUM	NO	2	0.714		
F4240132310012	32-310	FLEX HOSE 25MM BORE RAYON BRAIDED	NO	2	10.000		
F4240132310013	32-310	HEX HD SCRU-M12X50 -4.6-IS1363P2	NO	44	2.596		
F4240132310014	32-310	NUT -M12 -CL4-IS1363P3	NO	44	0.880		
F4240132310015	32-310	PUN WASHER-M12 -IS2016-A	NO	44	0.440		
F4240132310016	32-310	MILL BOARD 25 MM - TP 23296	KG	5	5.000		
F4240132310017	32-310	FIXING PIN L - 225	NO	6,800	340.000		
F4240132310018	32-310	RETAINER TYPE-A	NO	6,800	414.800		
F4240132310019	32-310	AL CASING SUPPORT 03-650L	NO	2,270	340.500		
F4240132310020	32-310	TAPSCREW-ST 4.2X13C	NO	45,000	45.000		
F4240132310021	32-310	WIRE DIA 0.914 MM - GI - IS280	KG	120.000	120.000		
F4240132310022	32-310	PLAINALUMINI SH 1.6 MM THK IS737/19000H2	M2	1,150.000	4,968.000		

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F4240132310023	32-310	NUT -M10 -CL4-IS1363P3	NO	218.000	2.180
F4240132310024	32-310	SHEET 1.6 MM	NO	20.000	55.020
F4240132310025	32-310	SHEET:3.15	NO	8.000	296.736
F4240132310026	32-310	WELD STUD M10	NO	218.000	47.306
F4240132310027	32-310	WASHER A11	NO	250.000	10.000
F4240132310028	32-310	BENT SHEET	NO	218.000	361.880
F4240132310029	32-310	BRACKET	NO	218.000	94.394
F4240132310030	32-310	SUPPORT SHEET	NO	41.000	8.774
F4240132310031	32-310	CASING SUPPORT	NO	13.000	78.585
F4240132310032	32-310	CASING SUPPORT	NO	13.000	121.810
F4240132310033	32-310	SHEET 2	NO	13.000	163.280
F4240132310034	32-310	ROD D 6.0 MM-IS2062GRA SAE1010/SAE1018	NO	40.000	53.280
F4240132310035	32-310	RETAINER TYPE 'C'	NO	800.000	33.600
F4240132310036	32-310	WELD MESH 50 X 50 WIRE DIA 3MM - IS 1566	M2	170.000	377.230
F4240133210001	33-210	CASTABLEREFRACTORY GR A	KG	9,325.000	9,325.000
F4240133230001	33-230	POURABLE INSULATION	KG	1,000.000	1,000.000
F4240133321001	33-321	WOOL-100KG/CU.M-50MM ONE SIDE GI WIRENET	M2	850.000	4,675.000
F4240133321002	33-321	WOOL-100KG/CU.M-60MM-ONE SIDE GI WIRENET	M2	2,110.000	13,715.000
F4240133321003	33-321	WOOL-100KG/CU.M-50MM-BOTH SIDE GI WIRENE	M2	900.000	5,400.000
<b>SUB-TOTAL WEIGHT OF INSULATION</b>					42131.957
<b>C. NON PRESSURE PARTS</b>					
F4240136321001	36-321	FLB321-101 ISMB150	NO	4.000	83.680
F4240136321002	36-321	FLB321-102 ISMB125	NO	2.000	24.656
F4240136321003	36-321	FLB321-104 ISMB125	NO	1.000	12.301
F4240136321004	36-321	FLB321-105 ISMB150	NO	4.000	73.584
F4240136321005	36-321	FLB321-106 ISMB450	NO	4.000	275.120
F4240136321006	36-321	FLB321-107 ISMB125	NO	6.000	42.210
F4240136321007	36-321	FLB321-108 ISMB125	NO	1.000	12.361
F4240136321008	36-321	FLB321-109 ISMB125	NO	13.000	172.185
F4240136321009	36-321	FLB321-110 ISMB200	NO	3.000	157.746
F4240136321010	36-321	FLB321-111 ISMB200	NO	1.000	52.582
F4240136321011	36-321	FLB321-112 ISMB125	NO	16.000	133.872
F4240136321012	36-321	FLB321-113 ISMC75	NO	2.000	8.362
F4240136321013	36-321	FLB321-114 ISMC75	NO	10.000	78.080
F4240136321014	36-321	FLB321-115 ISMB200	NO	2.000	110.074
F4240136321015	36-321	FLB321-116 ISMB125	NO	2.000	21.980
F4240136321016	36-321	FLB321-117 ISMB500	NO	2.000	1,497.930
F4240136321017	36-321	FLB321-118 ISMB400	NO	2.000	1,093.258
F4240136321018	36-321	FLB321-119 ISMB125	NO	1.000	6.776
F4240136321019	36-321	FLB321-120 ISMB125	NO	1.000	7.266
F4240136321020	36-321	FLB321-121 ISMB150	NO	2.000	60.604
F4240136321021	36-321	FLB321-122 ISMB125	NO	1.000	13.245
F4240136321022	36-321	FLB321-123 ISMC75	NO	2.000	4.192
F4240136321023	36-321	FLB321-124 ISMB450	NO	2.000	975.264
F4240136321024	36-321	FLB321-125 ISMB125	NO	4.000	53.056

F4240136321025	36-321	FLB321-126 ISMB250	NO	2.000	297.568
F4240136321026	36-321	FLB321-127 ISMB125	NO	10.000	199.610
F4240136321027	36-321	FLB321-128 ISMB125	NO	3.000	36.984
F4240136321028	36-321	FLB321-129 ISMB150	NO	1.000	14.925
F4240136321029	36-321	FLB321-130 ISMB150	NO	1.000	14.860
F4240136321030	36-321	FLB321-131 ISMB125	NO	2.000	14.070
F4240136321031	36-321	FLB321-132 ISMB150	NO	3.000	88.656
F4240136321032	36-321	FLB321-133 ISMB125	NO	1.000	12.395
F4240136321033	36-321	FLB321-134 ISMB125	NO	1.000	17.329
F4240136321034	36-321	FLB321-135 ISMB125	NO	1.000	17.329
F4240136321035	36-321	FLB321-136 ISMB150	NO	1.000	29.552
F4240136321036	36-321	FLB321-137 ISMB400	NO	2.000	1,310.090
F4240136321037	36-321	FLB321-138 ISMB200	NO	2.000	102.624
F4240136321038	36-321	POST321-201 ISMC75	NO	9.000	206.883
F4240136321039	36-321	POST321-202 ISMC75	NO	1.000	22.987
F4240136321040	36-321	POST321-203 ISMC75	NO	4.000	89.184
F4240136321041	36-321	POST321-204 ISMC75	NO	2.000	45.974
F4240136322001	36-322	FBR322-501 DBA75X75X6	NO	1.000	39.452
F4240136322002	36-322	FBR322-502 DBA75X75X6	NO	1.000	39.452
F4240136322003	36-322	FBR322-503 DBA75X75X6	NO	1.000	40.015
F4240136322004	36-322	FBR322-504 DBA75X75X6	NO	1.000	40.015
F4240136322005	36-322	FBR322-505 DBA75X75X6	NO	2.000	78.396
F4240136322006	36-322	FBR322-506 DBA75X75X6	NO	1.000	39.198
F4240136322007	36-322	FBR322-507 DBA75X75X6	NO	1.000	39.198
F4240136322008	36-322	FLB322-401 ISMB200	NO	1.000	52.582
F4240136322009	36-322	FLB322-402 ISMB200	NO	1.000	52.582
F4240136322010	36-322	FLB322-403 ISMB200	NO	5.000	278.420
F4240136322011	36-322	FLB322-404 ISMB200	NO	1.000	55.782
F4240136322012	36-322	FLB322-405 ISMB125	NO	2.000	16.770
F4240136322013	36-322	FLB322-406 ISMB200	NO	2.000	128.024
F4240136322014	36-322	FLB322-407 ISMB200	NO	2.000	110.074
F4240136322015	36-322	FLB322-408 ISMB150	NO	1.000	23.007
F4240136322016	36-322	FLB322-409 ISMB150	NO	1.000	23.007
F4240136322017	36-322	FLB322-410 ISMB125	NO	6.000	48.384
F4240136322018	36-322	FLB322-411 ISMB150	NO	2.000	46.732
F4240136322019	36-322	FLB322-412 ISMB200	NO	2.000	105.164
F4240136322020	36-322	FLB322-413 ISMB200	NO	1.000	63.745
F4240136322021	36-322	FLB322-414 ISMB250	NO	1.000	93.610
F4240136322022	36-322	FLB322-415 ISMB150	NO	2.000	26.618
F4240136322023	36-322	FLB322-416 ISMB125	NO	1.000	13.309
F4240136322024	36-322	FLB322-417 ISMB150	NO	2.000	39.730
F4240136322025	36-322	FLB322-418 ISMB125	NO	1.000	13.309
F4240136322026	36-322	FBR322-201 DBA80X80X8	NO	2.000	125.272
F4240136322027	36-322	FBR322-202 DBA80X80X8	NO	1.000	62.636
F4240136322028	36-322	FBR322-203 DBA80X80X8	NO	4.000	254.300
F4240136322029	36-322	FBR322-204 DBA80X80X8	NO	2.000	126.142
F4240136322030	36-322	FBR322-205 DBA80X80X8	NO	4.000	254.300
F4240136322031	36-322	FBR322-206 DBA80X80X8	NO	1.000	67.871
F4240136322032	36-322	FBR322-207 DBA80X80X8	NO	1.000	67.850

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F4240136322033	36-322	FBR322-208 DBA80X80X8	NO	1.000	63.071
F4240136322034	36-322	FBR322-209 DBA80X80X8	NO	2.000	135.686
F4240136322035	36-322	FBR322-210 DBA80X80X8	NO	2.000	135.570
F4240136322036	36-322	FBR322-211 DBA80X80X8	NO	2.000	135.584
F4240136322037	36-322	FBR322-212 DBA80X80X8	NO	1.000	63.071
F4240136322038	36-322	FBR322-213 DBA80X80X8	NO	1.000	62.636
F4240136322039	36-322	FLB322-103 ISMB250	NO	4.000	912.656
F4240136322040	36-322	FLB322-104 ISMB250	NO	4.000	922.952
F4240136322041	36-322	FLB322-105 ISMB600	NO	2.000	2,143.464
F4240136322042	36-322	FLB322-106 ISMB250	NO	4.000	573.092
F4240136322043	36-322	FLB322-107 ISMB125	NO	1.000	25.589
F4240136322044	36-322	FLB322-108 ISMB125	NO	3.000	79.143
F4240136322045	36-322	FLB322-109 ISMB200	NO	4.000	390.256
F4240136322046	36-322	FLB322-110 ISMB125	NO	2.000	50.710
F4240136322047	36-322	FLB322-111 ISMB125	NO	2.000	52.558
F4240136322048	36-322	FLB322-112 ISMB150	NO	4.000	134.372
F4240136322049	36-322	FLB322-113 ISMB600	NO	4.000	4,969.200
F4240136322050	36-322	PLATE 16.0 MM - IS2062E250A	NO	16.000	477.280
F4240136322051	36-322	PLATE 25.0 MM -IS2062E250BR	NO	8.000	357.176
F4240136322052	36-322	PLATE 10.0 MM - IS2062E250A(FE410W)	NO	8.000	54.952
F4240136322053	36-322	SLIDE BEARING PLATE(ASBESTOS FREE)	NO	8.000	36.296
F4240136322054	36-322	ANGLE 50 X 50 X 6 -IS2062E250A	NO	16.000	12.240
F4240136322055	36-322	PLATE 16.0 MM - IS2062E250A	NO	8.000	95.504
F4240136810001	36-810	LSEFFGG 32 X305X6000	NO	10.000	892.880
F4240136810002	36-810	LSEFFGG 32 X515X6000	NO	15.000	2,194.800
F4240136810003	36-810	LSEFFGG 32 X995X6000	NO	15.000	4,149.600
F4240136810004	36-810	CADMIUM PLATED CLIPS	NO	480.000	28.320
F4240136810005	36-810	PLATE 5.00 MM-IS2062E250A	NO	20.000	75.360
F4240136820001	36-820	STAIR-1	NO	2.000	1,449.488
F4240136820002	36-820	HOOD LADDER-1	NO	2.000	251.406
F4240136820003	36-820	VERTICAL LADDER	NO	4.000	131.528
F4240136850001	36-850	HAND RAIL & POST FOR PLATFORM 3M ASSY	NO	2.000	69.090
F4240136850002	36-850	HAND RAIL & POST FOR PLATFORM 4.5M ASSY	NO	6.000	324.828
F4240136850003	36-850	HAND RAIL & POST FOR PLATFORM 6M ASSY	NO	4.000	294.920
F4240136850004	36-850	HAND RAIL POST FOR PLATFORM	NO	40.000	129.920
F4240136850005	36-850	MIDDLE HANDRAIL FOR PLATFORM	NO	52.000	241.280
F4240136850006	36-850	HAND RAIL & POST FOR STAIRS 4.5M ASSY	NO	4.000	166.676
F4240136850007	36-850	HAND RAIL POST FOR STAIR	NO	4.000	13.212
F4240136850008	36-850	MIDDLE HANDRAIL FOR STAIR	NO	4.000	18.560
F4240136850009	36-850	90 DEGREE BEND	NO	116.000	164.024
F4240136850010	36-850	135 DEGREE BEND	NO	8.000	9.376
F4240136850011	36-850	SPL.BEND	NO	4.000	9.772
F4240136850012	36-850	ERW TUBE DIA. 42.4 X 3.2	NO	11.000	204.138
F4240136850013	36-850	ISA 65X65X6	M	6.000	34.800

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F4240136850014	36-850	GUARD PLATE 6	NO	26.000	306.150
F4240137810001	37-810	CORRU.ALU.SHEET 1.6X920X1400-QTY-68 NOS	KG	497.409	497.409
F4240137810002	37-810	CORRU.ALU.SHEET 1.6X920X2500-QTY-34 NOS	KG	444.115	444.115
F4240145200001	45-200	SADC POWER CYLINDER 4" X 4" (UPWARD MTG)	NO	8.000	120.000
F4240145200002	45-200	SADC POWER CYLINDER 4" X 4"(DOWNWARD MTG)	NO	8.000	120.000
F4240145200003	45-200	BURNER TILT POWER CYLINDER	NO	4.000	800.000
F4240145220001	45-220	FLAT 50 X 6; L=130	NO	24.000	7.200
F4240145220002	45-220	FLAT 50X6; L=17	NO	8.000	0.320
F4240145220003	45-220	PIPE CLAMP FL 50X6; L=97	NO	20.000	4.560
F4240145220004	45-220	TUBE D14X2; L=1000	NO	16.000	9.600
F4240145220005	45-220	TUBE NB 40 D48.3 X 3.68	M	10.000	40.500
F4240145320001	45-320	ANGLE FOR EA ISA75X75X6-1215L	NO	16.000	132.192
F4240145320002	45-320	SHIELDING PLATE FOR EA PL5X186X1215	NO	16.000	141.920
F4240145320003	45-320	ANGLE FOR OIL/AIR/COAL ISA 50X50X6-1215L	NO	140.000	765.520
F4240145320004	45-320	SHIELDING PLATE FOR OIL/AIR PL5X521X1215	NO	32.000	795.040
F4240145320005	45-320	SHIELDING PLATE FOR COAL PL5X519X1215	NO	36.000	891.612
F4240145320006	45-320	SHIELDING PLATE FOR COAL PL5X417X1215	NO	36.000	716.400
F4240145320007	45-320	STOPPER PLATE PL6X50X1215L	NO	36.000	103.428
F4240145320008	45-320	LOCKING PLATE PL6X60X100L	NO	108.000	30.564
F4240145321001	45-321	PLATE WELDMENT-I FOR CORS 1&3	NO	2.000	317.762
F4240145321002	45-321	PLATE WELDMENT-II FOR CORS 2&4	NO	2.000	249.996
F4240145321003	45-321	SLOTTED PL(TRUSS) PL25X200X310	NO	4.000	47.200
F4240145321004	45-321	SLOTTED PL(BS SIDE) PL 20X150X370	NO	4.000	28.800
F4240145321005	45-321	PL 20X200X235	NO	4.000	28.000
F4240145321006	45-321	SHIM PL 10X150X150	NO	8.000	14.000
F4240145321007	45-321	SHEAR PIN D 25;69	NO	4.000	1.096
F4240145321008	45-321	SUPPORT PLATE PL 6X75X200	NO	32.000	15.040
F4240145321009	45-321	TUBE D42.4X3.20 L=230	NO	16.000	11.360
F4240145321010	45-321	ANCHOR PIVOT PIN D 33 ; 244	NO	16.000	17.600
F4240145321011	45-321	SPLIT PIN 4X56MM	NO	16.000	0.128
F4240145321012	45-321	FRAME	NO	8.000	315.400
F4240145321013	45-321	PLATE PL.6X199X2614	NO	8.000	195.936
F4240145321014	45-321	PLATE PL.6X150X1223	NO	8.000	68.952
F4240145321015	45-321	SH.2.5X272X1187	NO	8.000	50.712
F4240145321016	45-321	SUPPORT CLIP	NO	96.000	54.720
F4240145321017	45-321	CERAMIC CLOTH SH.3X 80;10MR	NO	4.000	7.680
F4240145321018	45-321	HEX HD BOLT M24X65 CL:10.9	NO	184.000	62.560
F4240145321019	45-321	HEX NUT M24-10	NO	184.000	20.240
F4240145321020	45-321	MACHINED WASHER 25	NO	40.000	1.280
F4240145321021	45-321	BURNER FRAME WASHER	NO	144.000	10.080
F4240145321022	45-321	PEDESTAL	NO	4.000	56.400

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F4240145321023	45-321	BOLT-M16X60	NO	16.000	1.968
F4240145321024	45-321	HEX NUT M16	NO	16.000	0.480
F4240145321025	45-321	PLAIN WASHER A16	NO	16.000	0.608
F4240145321026	45-321	INNER PANEL INT AIR CORNER 1 AND 3	NO	6.000	368.238
F4240145321027	45-321	INNER PANEL INT AIR CORNER 2 AND 4	NO	6.000	368.238
F4240145321028	45-321	INNER PANEL OFA CORNER 1 AND 3	NO	4.000	235.704
F4240145321029	45-321	INNER PANEL OFA CORNER 2 AND 4	NO	4.000	235.704
F4240145321030	45-321	FRONT OUTER PANEL (INT.AIR)(COR 1&3)	NO	6.000	97.560
F4240145321031	45-321	FRONT OUTER PANEL (OFA)(COR 1&3)	NO	2.000	54.654
F4240145321032	45-321	SCRU HEX M8X16	NO	100.000	1.100
F4240145321033	45-321	CAP NUT M8	NO	100.000	1.200
F4240145321034	45-321	PUN WASHER-M8	NO	100.000	0.200
F4240145321035	45-321	FRONT OUTER PANEL (INT.AIR)(COR 1&30)	NO	6.000	97.560
F4240145321036	45-321	FRONT OUTER PANEL (OFA)(2&4)	NO	2.000	54.654
F4240145321037	45-321	SCRU HEX M8X16	NO	100.000	1.100
F4240145321038	45-321	CAP NUT M8	NO	100.000	1.200
F4240145321039	45-321	PUN WASHER-M8	NO	100.000	0.200
F4240145321040	45-321	HEX HD SCRU-M12X30	NO	800.000	32.800
F4240145321041	45-321	NUT -M12	NO	800.000	16.000
F4240145321042	45-321	PUN WASHER-M12	NO	800.000	8.000
F4240145321043	45-321	PACKING CLOTH SH 3X40X 140M	NO	4.000	53.760
F4240145321044	45-321	HIGH TEMP (750F & ABOVE) SPRAY LUBRICANT	NO	4.000	2.000
F4240145321045	45-321	ANTI SIEZE THREAD LUBRICANT	KG	2.000	2.000
F4240145325001	45-325	ANGLE 150 X 150 X 12(FOR IA & OIL COMPT)	NO	32.000	707.616
F4240145325002	45-325	OVERFIRE AIR NOZZLE TIP - CORNERS 1&3	NO	4.000	579.184
F4240145325003	45-325	END AIR NOZZLE TIP CORNERS 1&3	NO	4.000	276.560
F4240145325004	45-325	COAL NOZZLE TIP ASSLY - CORNERS 1&3	NO	18.000	3,782.700
F4240145325005	45-325	OIL NOZZLE TIP CORNERS 1&3	NO	10.000	911.520
F4240145325006	45-325	INTER AIR NOZZLE TIP CORNERS 1&3	NO	6.000	731.568
F4240145325007	45-325	SEAL PLATE FOR COAL TIP - CORNERS 1&3	NO	18.000	317.880
F4240145325008	45-325	TUBULAR REACH ROD CORNERS 1&3	NO	42.000	327.516
F4240145325009	45-325	REACH ROD PIN D16.6;38L	NO	42.000	2.520
F4240145325010	45-325	CONNECTING LINK ASSLY "L"=1985	NO	10.000	52.870
F4240145325011	45-325	REACH ROD PIVOT PIN,D50,L107	NO	42.000	25.200
F4240145325012	45-325	L-LEVER ROUND PIN,D19,L=44	NO	42.000	7.140
F4240145325013	45-325	HIGH TEMP (750F & ABOVE) SPRAY LUBRICANT	NO	2.000	1.000
F4240145325014	45-325	ANTI SIEZE THREAD LUBRICANT	KG	1.000	1.000
F4240145325015	45-325	CN PIVOT PIN(D22.5);D31,L-63	NO	36.000	7.920
F4240145325016	45-325	SPARE SHEAR PIN;D25 L-69	NO	8.000	2.192

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F4240145325017	45-325	ANGLE 150 X 150 X 12(FOR IA & OIL COMPT)	NO	32.000	707.616
F4240145325018	45-325	OVERFIRE AIR NOZZLE TIP - CORNERS 2&4	NO	4.000	579.184
F4240145325019	45-325	END AIR NOZZLE TIP CORNERS 2&4	NO	4.000	276.560
F4240145325020	45-325	COAL NOZZLE TIP ASSLY - CORNERS 2&4	NO	18.000	3,782.700
F4240145325021	45-325	OIL NOZZLE TIP CORNERS 2&4	NO	10.000	911.520
F4240145325022	45-325	INTER AIR NOZZLE TIP CORNERS 2&4	NO	6.000	731.568
F4240145325023	45-325	SEAL PLATE FOR COAL TIP - CORNERS 2&4	NO	18.000	317.880
F4240145325024	45-325	TUBULAR REACH ROD CORNERS 2&4	NO	42.000	327.516
F4240145325025	45-325	REACH ROD PIN D16.6;38L	NO	42.000	2.520
F4240145325026	45-325	CONNECTING LINK ASSLY "L"=1985	NO	10.000	52.870
F4240145325027	45-325	REACH ROD PIVOT PIN,D50,L107	NO	42.000	25.200
F4240145325028	45-325	L-LEVER ROUND PIN,D19,L=44	NO	42.000	7.140
F4240145325029	45-325	HIGH TEMP (750F & ABOVE) SPRAY LUBRICANT	NO	2.000	1.000
F4240145325030	45-325	ANTI SIEZE THREAD LUBRICANT	KG	1.000	1.000
F4240145325031	45-325	CN PIVOT PIN(D22.5);D31,L-63	NO	36.000	7.920
F4240145325032	45-325	SPARE SHEAR PIN;D25 L-69	NO	8.000	2.192
F4240145804001	45-804	BOFA ASSY CORNER 1 AND 3	NO	2.000	9,952.488
F4240145804002	45-804	BOFA ASSY CORNER 2 AND 4	NO	2.000	10,515.158
F4240147200001	47-200	PIPE COUPLING GASKET - 26" H	NO	50.000	65.000
F4240148207001	48-207	HOLLOW SQUARE PITOTTUBE	NO	2.000	944.520
F4240148262001	48-262	STRAIGHT DUCT WALL	NO	4.000	174.568
F4240148262002	48-262	PLATE 6.0 ; 300.0x2800.0	NO	4.000	158.256
F4240148262003	48-262	TRUSS	NO	2.000	47.804
F4240148262004	48-262	TRUSS	NO	2.000	47.724
F4240148262005	48-262	TRUSS	NO	2.000	46.274
F4240148262006	48-262	TRUSS	NO	2.000	46.198
F4240148262007	48-262	STRAIGHT DUCT WALL	NO	4.000	1,058.580
F4240148262008	48-262	STRAIGHT DUCT WALL	NO	4.000	994.516
F4240148262009	48-262	STRAIGHT DUCT WALL	NO	4.000	773.104
F4240148262010	48-262	STRAIGHT DUCT WALL	NO	4.000	718.288
F4240148262011	48-262	TRUSS	NO	4.000	72.444
F4240148262012	48-262	TRUSS	NO	2.000	57.776
F4240148262013	48-262	TRUSS	NO	2.000	57.780
F4240148262014	48-262	STRAIGHT DUCT WALL	NO	4.000	1,400.180
F4240148262015	48-262	STRAIGHT DUCT WALL	NO	2.000	647.850
F4240148262016	48-262	STRAIGHT DUCT WALL	NO	2.000	647.850
F4240148262017	48-262	ELBOW DUCT WALL	NO	2.000	700.880
F4240148262018	48-262	ELBOW DUCT WALL	NO	2.000	983.302
F4240148262019	48-262	ELBOW DUCT WALL	NO	2.000	1,222.570
F4240148262020	48-262	ELBOW DUCT WALL	NO	2.000	261.108
F4240148262021	48-262	ELBOW DUCT WALL	NO	2.000	312.450
F4240148262022	48-262	ELBOW DUCT WALL	NO	2.000	1,206.464
F4240148262023	48-262	ELBOW DUCT WALL	NO	2.000	459.944
F4240148262024	48-262	ELBOW DUCT WALL	NO	2.000	459.944

F4240148262025	48-262	ELBOW DUCT WALL	NO	2.000	1,206.464
F4240148262026	48-262	TRANSITION DUCT WALL	NO	1.000	305.723
F4240148262027	48-262	TRANSITION DUCT WALL	NO	1.000	367.986
F4240148262028	48-262	TRANSITION DUCT WALL	NO	1.000	438.310
F4240148262029	48-262	TRANSITION DUCT WALL	NO	1.000	390.355
F4240148262030	48-262	T-DUCT WALL	NO	2.000	263.226
F4240148262031	48-262	T-DUCT WALL	NO	2.000	619.642
F4240148262032	48-262	T-DUCT WALL	NO	2.000	121.582
F4240148262033	48-262	T-DUCT WALL	NO	2.000	1,411.640
F4240148262034	48-262	T-DUCT WALL	NO	2.000	1,411.640
F4240148262035	48-262	T-DUCT WALL	NO	2.000	1,320.292
F4240148262036	48-262	T-DUCT WALL	NO	2.000	224.736
F4240148262037	48-262	T-DUCT WALL	NO	2.000	511.372
F4240148262038	48-262	ISMC150 ; 4312.0	NO	4.000	289.772
F4240148262039	48-262	T-DUCT WALL	NO	2.000	216.462
F4240148262040	48-262	T-DUCT WALL	NO	2.000	973.924
F4240148262041	48-262	T-DUCT WALL	NO	2.000	973.924
F4240148262042	48-262	TRUSS	NO	2.000	50.542
F4240148262043	48-262	TRUSS	NO	2.000	50.542
F4240148262044	48-262	TRUSS	NO	2.000	23.368
F4240148262045	48-262	TRUSS	NO	2.000	23.366
F4240148262046	48-262	TRANSITION DUCT WALL	NO	2.000	431.076
F4240148262047	48-262	TRANSITION DUCT WALL	NO	2.000	431.076
F4240148262048	48-262	TRANSITION DUCT WALL	NO	2.000	387.782
F4240148262049	48-262	TRANSITION DUCT WALL	NO	2.000	387.782
F4240148262050	48-262	ELBOW DUCT WALL	NO	2.000	362.582
F4240148262051	48-262	ELBOW DUCT WALL	NO	2.000	353.704
F4240148262052	48-262	ELBOW DUCT WALL	NO	2.000	511.372
F4240148262053	48-262	ELBOW DUCT WALL	NO	2.000	635.458
F4240148262054	48-262	ELBOW DUCT WALL	NO	2.000	121.582
F4240148262055	48-262	ELBOW DUCT WALL	NO	2.000	1,060.352
F4240148262056	48-262	ELBOW DUCT WALL	NO	2.000	1,060.352
F4240148262057	48-262	TRUSS	NO	4.000	101.084
F4240148262058	48-262	TRUSS	NO	4.000	101.084
F4240148262059	48-262	TRUSS	NO	4.000	46.736
F4240148262060	48-262	TRUSS	NO	4.000	46.732
F4240148262061	48-262	STRAIGHT DUCT WALL	NO	2.000	827.842
F4240148262062	48-262	STRAIGHT DUCT WALL	NO	2.000	233.362
F4240148262063	48-262	STRAIGHT DUCT WALL	NO	2.000	567.994
F4240148262064	48-262	STRAIGHT DUCT WALL	NO	2.000	698.644
F4240148262065	48-262	STRAIGHT DUCT WALL	NO	2.000	698.644
F4240148262066	48-262	STRAIGHT DUCT WALL	NO	2.000	698.414
F4240148262067	48-262	STRAIGHT DUCT WALL	NO	2.000	233.362
F4240148262068	48-262	STRAIGHT DUCT WALL	NO	2.000	632.708
F4240148262069	48-262	STRAIGHT DUCT WALL	NO	2.000	698.644
F4240148262070	48-262	STRAIGHT DUCT WALL	NO	2.000	698.644
F4240148262071	48-262	STRAIGHT DUCT WALL	NO	4.000	284.324
F4240148262072	48-262	STRAIGHT DUCT WALL	NO	4.000	239.724
F4240148262073	48-262	STRAIGHT DUCT WALL	NO	4.000	285.584

F4240148262074	48-262	STRAIGHT DUCT WALL	NO	4.000	240.824
F4240148262075	48-262	T-DUCT WALL	NO	1.000	293.061
F4240148262076	48-262	T-DUCT WALL	NO	1.000	69.972
F4240148262077	48-262	T-DUCT WALL	NO	1.000	58.912
F4240148262078	48-262	T-DUCT WALL	NO	1.000	305.638
F4240148262079	48-262	T-DUCT WALL	NO	1.000	292.886
F4240148262080	48-262	PLATE 6.0 ; 489.0x1950.0	NO	1.000	44.910
F4240148262081	48-262	T-DUCT WALL	NO	1.000	70.795
F4240148262082	48-262	T-DUCT WALL	NO	1.000	66.804
F4240148262083	48-262	T-DUCT WALL	NO	1.000	18.102
F4240148262084	48-262	T-DUCT WALL	NO	1.000	157.256
F4240148262085	48-262	T-DUCT WALL	NO	1.000	292.818
F4240148262086	48-262	T-DUCT WALL	NO	1.000	324.983
F4240148262087	48-262	T-DUCT WALL	NO	1.000	435.748
F4240148262088	48-262	PLATE 6.0 ; 483.0x1950.0	NO	1.000	44.358
F4240148262089	48-262	T-DUCT WALL	NO	1.000	293.061
F4240148262090	48-262	T-DUCT WALL	NO	1.000	69.972
F4240148262091	48-262	T-DUCT WALL	NO	1.000	300.718
F4240148262092	48-262	T-DUCT WALL	NO	1.000	58.912
F4240148262093	48-262	T-DUCT WALL	NO	1.000	287.966
F4240148262094	48-262	PLATE 6.0 ; 489.0x1950.0	NO	1.000	44.910
F4240148262095	48-262	T-DUCT WALL	NO	1.000	70.795
F4240148262096	48-262	T-DUCT WALL	NO	1.000	435.748
F4240148262097	48-262	T-DUCT WALL	NO	1.000	157.256
F4240148262098	48-262	T-DUCT WALL	NO	1.000	66.804
F4240148262099	48-262	T-DUCT WALL	NO	1.000	18.102
F4240148262100	48-262	T-DUCT WALL	NO	1.000	292.818
F4240148262101	48-262	T-DUCT WALL	NO	1.000	324.983
F4240148262102	48-262	PLATE 6.0 ; 483.0x1950.0	NO	1.000	44.358
F4240148262103	48-262	TRANSITION DUCT WALL	NO	1.000	305.723
F4240148262104	48-262	TRANSITION DUCT WALL	NO	1.000	367.961
F4240148262105	48-262	TRANSITION DUCT WALL	NO	1.000	438.310
F4240148262106	48-262	TRANSITION DUCT WALL	NO	1.000	390.355
F4240148264001	48-264	FULLSIZE ROUND CORNER EXPJT 2040X2040#4	NO	8.000	6,378.816
F4240148264002	48-264	FS RC EXPN JOINT 2890X2890 #2	NO	6.000	4,045.920
F4240148264003	48-264	FULLSIZE ROUND CORNER EXPJT 2634X1260 #2	NO	4.000	1,902.040
F4240148265001	48-265	RESTRAINT-1	NO	32.000	309.952
F4240148265002	48-265	PLT 16;250X200	NO	22.000	138.160
F4240148265003	48-265	PLT 16;475X200	NO	10.000	119.320
F4240148265004	48-265	PLT 16;476X475	NO	2.000	56.796
F4240148265005	48-265	CHANNEL BOX-2	NO	4.000	570.588
F4240148265006	48-265	CHANNEL BOX-3	NO	8.000	540.832
F4240148265007	48-265	CHANNEL BOX-4	NO	4.000	543.708
F4240148265008	48-265	CHANNEL BOX-5	NO	4.000	420.456
F4240148265009	48-265	CHANNEL BOX-6	NO	2.000	223.720
F4240148265010	48-265	CHANNEL BOX-7	NO	2.000	223.720
F4240148265011	48-265	CHANNEL BOX-8	NO	2.000	226.860
F4240148265012	48-265	RESTRAINT-2	NO	18.000	309.402

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F4240148265013	48-265	CHANNEL BOX-9	NO	4.000	243.136
F4240148265014	48-265	CHANNEL BOX-10	NO	4.000	426.480
F4240148265015	48-265	CHANNEL BOX-11	NO	4.000	210.856
F4240148265016	48-265	CHANNEL BOX-12	NO	8.000	599.872
F4240148265017	48-265	CHANNEL BOX-13	NO	8.000	955.552
F4240148265018	48-265	RESTRAINT-3	NO	16.000	249.584
F4240148265019	48-265	STOPPER	NO	28.000	41.216
F4240148265020	48-265	EXPANSION JOINT (W.BCONN. DUCT)	NO	8.000	122.520
F4240148265021	48-265	EXPANSION JOINT (W.BCONN. DUCT)	NO	8.000	119.976
F4240148265022	48-265	EXPANSION JOINT (W.BCONN. DUCT)	NO	2.000	21.694
F4240148265023	48-265	OMEGA EXP. JOINT	NO	2.000	56.272
F4240148265024	48-265	OMEGA EXP. JOINT	NO	2.000	73.424
F4240148265025	48-265	OMEGA EXP. JOINT	NO	4.000	22.712
F4240148915001	48-915	MAN HOLE DOOR 450X450 - CS	NO	6.000	346.296
F4240148915002	48-915	GRAB BAR-1	NO	6.000	20.400
F4240148915003	48-915	GRAB BAR-2	NO	6.000	51.600
F4240148993001	48-993	PLATE 6	M2	25.000	1,177.500
F4240148993002	48-993	ISA 75X75X6; 15 RM	M	15.000	102.000
F4240148993003	48-993	ISMC 100; 10 RM	M	10.000	95.600
F4240148993004	48-993	ISMC 150; 15 RM	M	15.000	252.000
F4240148993005	48-993	ISMC 200; 7 RM	M	7.000	239.400
F4240148993006	48-993	PIPE DIA 89.5: 10 RM	M	10.000	98.500
F4240148993007	48-993	SH 2; 25	M2	25.000	196.250
F4240148993008	48-993	PLATE 10 MM-IS2062E250A	M2	2.000	157.000
F4240148993009	48-993	PLATE 16	M2	2.000	251.200
F4240148993010	48-993	ISMC 125; 15 M	M	15.000	196.500
<b>SUB TOTAL WEIGHT OF NON PRESSURE PARTS</b>					<b>144386.739</b>
TOTAL WEIGHT(PP+INS+NPP)/UNIT				200720 kGS	
TOTAL WEIGHT //UNIT				200.72 MT SAY 201 MT	
TOTAL WEIGHT OF ITEMS FOR THREE UNITS				603 MT	

**Note: Quantity variation as per GCC shall be applicable.**

ANNEXURE-III[REF. PRICE SCHEDULE, VOL-III, SCH-2, SL. NO.C]

**TENTATIVE LIST OF NEWLY SUPPLIED C&I & ELECTRICAL ITEM DETAILS FOR ERECTION, LAYING,  
TERMINATION, WELDING, TESTING, COMMISSIONING & PG TEST FOR DE-NOX SYSTEM OF BOILER  
U#5,6,7 AT NTPC KAHALGAON**

## A) NEWLY SUPPLIED ITEMS

DU/MTL CODE	PGMA	Description	Unit	Qty/ Unit	Qty for Three Units	DU Wt In Kgs/Unit
F4240197282001	97-282	NORMALLY CLOSED - SOLENOID VALVE	NO	6	18	6.000
F4240197282002	97-282	NORMALLY OPEN - SOLENOID VALVE	NO	6	18	6.000
F4240197591001	97-591	BURNER TILT SHEAR PIN FAILURE INDI. BOX	NO	1	3	5.000
F4240197591002	97-591	HEAVY DUTY LIMIT SWITCH	NO	6	18	2.700
	95-088	FSSS FLAME SCANNERS items	Set	1	3	20.000
		Flame Scanner Pigtail Cable	No	9	27	
L424119759201001	97592	CONNECTOR,1/2" NPT(F) X 1/4" OD, SS	No	40	120	
L424119759201002	97592	CONNECTOR,1/2" NPT(F) X 3/8" OD, SS	No	5	15	
L424119759201003	97592	CONNECTOR,1/4" NPT(M) X 1/4" OD, SS	No	70	210	
L424119759201004	97592	CONNECTOR,3/8" NPT(M) X 3/8" OD, SS	No	10	30	
L424119759201005	97592	EQUAL TEE UNION, 1/4", SS	No	30	90	
L424119759201006	97592	EQUAL TEE UNION, 3/8", SS	No	5	15	
L424119759201007	97592	STRAIGHT CONNECTOR,1/4" OD, SS	No	55	165	
L424119759201008	97592	BULKHEAD CONNECTOR,1/4" BSP(M) X 1/4" OD	No	60	180	
L424119759201009	97592	ELBOW,1/4" BSP(M ) X 1/4" BSP(F), SS	No	60	180	
L424119759201010	97592	TAPE, 1/2" -10 METERS, TEFLON	Nos	10	30	
L424119759201011	97592	ALUMINIUM STRIPS - 300 MM X 25 MM X 3 MM	Nos	50	150	
L424119759202001	97592	1/4" OD SS TUBE	Mtrs	650	1950	
L424119759202002	97592	3/8" OD SS TUBE	Mtrs	10	30	

TENDER NO. PSER:SCT:KGN-S2009:19						
VOLUME - IF,R-0	TECHNICAL CONDITION OF CONTRACT, SCOPE, ETC			PAGE 46 OF 56		
L424119759203001	97592	1/4" TEFLON HOSE- 2 METER PER PIECE	Mtrs	28	84	
L424119759204001	97592	EQUAL TEE, 3/4", A105, CL: 3000	Nos	10	30	
L424119759204002	97592	REDUCER, 3/4" SW X 1/2" NPT(M), A105	Nos	12	36	
L424119759204003	97592	EQUAL TEE, 3/4", SS304, CL:3000	Nos	2	6	
L424119759204004	97592	REDUCER, 3/4" SW X 1/2" NPT(M), A105	Nos	4	12	
L424119759204005	97592	SEAMLESS TUBE, 3/4" SCH 40, A213 TP304	Nos	24	84	
L424119759204006	97592	REDUCER, 1" SW X 3/4" SW, A105	Nos	2	6	
L424119759204007	97592	COUPLING, 3/4", SS304, CL: 3000	Nos	20	60	
L424119759204008	97592	PIPE NIPPLE, 1" SCH 40, PLAIN, SS304	Nos	4	12	
L424119759204009	97592	EQ TEE, 1" SW X 1" NPT(F) X 1" SW, SS304	Nos	2	6	
L424119759204010	97592	GATE VALVE, 3/4" SW, CL:150, A105	Nos	6	18	
L424119759204011	97592	NIPPLE, 1" SCH40, 1"NPT(M)X1" SW, A105	Nos	2	6	
L424119759204012	97592	REDUCER, 1" SW X3/4" SW, SS304	Nos	2	6	
L424119759601001	97596	FIXED HD CCTV CAMERA FOR HOPPER VIEWING	Nos	4	12	
L424119759601002	97596	ACCESSORIES FOR FIXED HD CAMERA SYSTEM	Set	1	3	
	95-282	Flowmeters	Set	1	3	10.000
	95-591	BURNER TILT SHEAR PIN FAILURE SYSTEM a) Junction Box for Shear pin failure indication-4 Nos b)Limit switch for shear pin failure indication-20 Nos	Set	1	3	12.000
		<b>INSTRUMENTATION CABLES:</b> a) 2PX0.5 Sq mm I & OA shielded : 1200 mtrs b) 4PX0.5 Sq mm I & OA shielded : 3000 mtrs c) 8PX0.5 Sq mm I & OA shielded: 900 mtrs	Set	1	3	
		POWER CABLES: a) 2CX2.5 Sq mm power cable:Qty1080 Mtrs b) 3CX2.5 Sq mm power cable:Qty 900 Mtrs c) 10CX2.5 Sq mm power cable:Qty 800 Mtrs d) 3CX10 Sq mm power	Set	1	3	

		cable: Qty 400 Mtrs				
		CONTROL CABLES FOR CO ANALYSER: 5CX2.5 Sq MM, 12CX2.5 Sq MM, 19CX1.5 Sq MM	Mtrs	1500	4500	
		CABLE TRAYS a) Height 25 mm, Width 50 mm, Qty 125 Mtrs b) Height 50 mm, Width 100 mm, With Cover: Qty 175 Mtrs c) Height 40 mm, Width 150 mm, With Cover: Qty 312.5 Mtrs	Set	1	3	
		JUNCTION BOX a) 24 Way JB: Qty 5 Nos b) 48 Way JB: Qty 2 Nos	Set	1	3	
95-596	CCTV system	Set	4	12	1,500.000	
	CO Analyser & Panel	Nos	1	3		
	Flow/Electronic Transmitters	Nos	2	6		
	Local Instrument Enclosure	Nos	3	9		
	SOCKET WELD FITTINGS	Set	1	3		
	Airfilter Regulator	Nos	4	12		
	Pr switch	Nos	4	12		
	E/p Converter	Nos	4	12		
	LIE/LIR	Nos	3	9		
	Impulse Pipe, ASTM A106 GR C 3/4" NB SCH 80	Mtrs	300	900		
	<b>Erection Materials</b>					
	GI PIPE-1/2" NB "GI pipe-1/2" NB Heavy grade / as per IS1239 threaded ends (1/2" NPT) to be protected Running length 6 Meters"	Mtrs	50	150		
	MS Channel 100x50x5 mm Web thick as per IS 2062 Grade A,	Mtrs	200	600		
	MS Angle 50x50x6 mm Web thick as per IS 2062 Grade A	Mtrs	400	1200		
	MS Plate 10mm thick IS2062	Kgs	100	300		
	HR Sheet 2.5mm thick as per IS 1079	Kgs	100	300		
	NIPPLE MAT: ASTM A106 Gr.B SIZE: 1" PLAIN SCH 40 LENGTH = 100 mm	Nos	2	6		
	NIPPLE MAT: ASTM A106 Gr.B SIZE: 3/4" NB SCH 80 / LENGTH = 100 mm ONE END - 3/4" NTPM , OTHER END : PLAINCAP/ ASTM A 105 -SIZE - 3/4" NPTF	Nos	4	12		

TENDER NO. PSER:SCT:KGN-S2009:19						
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		Flexible Hose SS Braided 1/2" OD x 1 Meter with clamps. One end with adopter of 1/2" NPTM and other end with Bras adopter of 1/2" NPTF Rating10 KG/CM2	Set	1	3	
		"Isolation valve Ball type body a 105 & Trim=SS 316. Size:1/2"NPTF Pr.Testing:900PSI"	Nos	2	6	
		COUPLING, MAT spec: ASTM A105 GALVANISED TO 10/15 MICRONS SIZE: 1/2" NPTF/ PR. TESTING: 800 PSI	Nos	35	105	
		ELBOW, MAT Spec: ASTM A105 GALVANISED TO 10/15 MICRONS SIZE: 1/2" NPTF/ PR. TESTING: 800 PSI	Nos	10	30	
		EQUAL TEE, MAT Spec: ASTM A105 GALVANISED TO 10/15 MICRONS SIZE: 1/2" NPTF/ PR. TESTING: 800 PSI	Nos	10	30	
		THREE PIECE UNION, MATL: ASTM A105 GALVANISED TO 10/15 MICRONS, SIZE: 1/2" NPTF, PRESSURE RATING: 800 PSI.	Nos	8	24	
		U CLAMP - TO SUIT 3/4" NB PIPE WITH NUTS AND WASHERS CS GALVANISED TO 10/15 MICRONS	Nos	500	1500	

**Note: Quantity & Size of C&I & Electrical Works/Items as mentioned above may vary to any extent.  
No extra payment shall be made for quantity/size variation**

## ANNEXURE-IV

**[REF. PRICE SCHEDULE, VOL-III, SCH-2, SL. NO.D]**

**TENTATIVE WEIGHT OF ITEMS (Mechanical/Electrical/C&I) FOR MATERIAL HANDLING IS  
MENTIONED BELOW. HOWEVER, ACTUAL QTY OF ITEMS TO BE DISMANTLED TO BE  
DECIDED AS PER ENGINEER I/C.**

Approximate weight of Items (Mechanical/Electrical/C&I) for Material Handling/Material Management is 210 MT/Unit (Refer Annex-II & III for list of items)

Thus for three units, total weight of items for Material Handling/Material Management is 630 MT

Shifting/re-stacking of Existing Materials inside coverd store/semi covered store/matl yard for three unit is 10 MT

**Note: Quanitity variation as per GCC shall be applicable.**

**ANNEXURE-V****TENTATIVE LIST OF T&P & MMD TO BE PROVIDED FOR FOR DE-NOX SYSTEM OF U#5,6,7 AT NTPC KAHALGAON**

SL NO	DESCRIPTION OF EQUIPMENT	CAPACITY	MINIMUM QUANTITY FOR EACH UNIT
A	T&P		
01	Tyre mounted mobile crane/hydra	12/ 14 T	02 Nos Minimum (1 No For Materail Management & 1 no for Erection Work)
02	Trailer (45-50 ft)	28 T, flat bed	As Required
03	Truck/ tractor trolley	9T/ 12T capacity	01 No minimum
04	Welding Generator / transformer (with welding cables)	As required	As Required
05	Heating torch along with regulator & hoses	As per requirement	As Required
06	TIG set with Argon regulator	As required	As Required
07	Tube Cutting Machine-As reqd	As required	As Required
08	Pre Heat, PWHT/Stress relieving Equipment & accessories	As required	As Required
09	Radiography Equipment	As required	As Required
10	3 phase distribution board with complete set up for drawl of construction power.	400 amp	As Required
11	Winches (electric) (winches also includes wire ropes)	10 T 05 T 3 T 2 T 1T	10 T-02 Nos Minimum Others, as required
	Winches (Hand operated)		
12	Electric cable for drawl & distribution of construction power	As per requirement	As Required
13	Semi-automatic welding m/c	As per requirement	As Required
14	Baking oven and holding oven with thermostat and temperature gauge for baking coated welding electrodes	As per requirement	As Required
15	Portable oven for coated welding electrodes	As per requirement	As Required
16	Hydraulic jacks	As per requirement	As Required

17	Slings, pulleys and de-shakles (from 1T to 10 T)	From 1T to 10 T capacity	As Required
18	Scaffolding pipes	As per requirement	As Required
19	Digital coat meter	As per requirement	As Required
20	LPI kit	As per requirement	As Required
21	All Ring & D.E. Spanners upto 36mm	As per requirement	As Required
22	Slogging spanners from 36mm to 100 mm	As per requirement	As Required
23	Adjustable Spanners	As per requirement	As Required
24	Allen key set upto (17 mm)	As per requirement	As Required
25	Hammer upto (05 Kg.)	As per requirement	As Required
26	Screw Driver all sizes	As per requirement	As Required
27	Hack – saw Frame	As per requirement	As Required
28	Files (smooth, rough) round, half round	As per requirement	As Required
29	Inside & Outside Circlip pliers	As per requirement	As Required
30	Wire rope (sling) 8mm, 12mm & 16mm (duly tested) Inappropriate length	As per requirement	As Required
31	D. Shackle 2T, 3T, 5T (duly tested)	As per requirement	As Required
32	Cutting torch along with regulator & hoses	As per requirement	As Required
33	Straight grinder	As per requirement	As Required
34	Chain Pulley block (2T, 3T) (duly tested)	As per requirement	As Required
35	Chain Pulley block (5T) (duly tested)	As per requirement	As Required
36	Angle Grinder	As per requirement	As Required
37	FF2 Grinder	As per requirement	As Required
38	Chisel 5", 12"	As per requirement	As Required
39	Try Square	As per requirement	As Required
40	Portable Electrode Heating oven	As per requirement	As Required
41	Vernier caliper	As per requirement	As Required
42	Measuring Tape (5 M)	As per requirement	As Required
43	Measuring Tape (10 M, 15 M)	As per requirement	As Required
44	Torch	As per requirement	As Required
45	24 V lamps and transformers	As per requirement	As Required
46	Lighting/ Extension Boards with ELCB, industrial plugs 5 point	As per requirement	As Required
47	Multipoint Welding Transformer	As per requirement	As Required
48	winding resistance measuring equipment	As per requirement	As Required
49	Multimeters	As per requirement	As Required
50	LT cable termination equipment	As per requirement	As Required
51	2.5 & below lugs.	As per requirement	As Required
52	PVC tape	As per requirement	As Required
53	Other MMD's		
	straight edge, master level, square level, inside & outside micrometer, taper gauge, filler gauge, dial gauge, tape, etc	As per requirement	As per requirement

## NOTE

1.0	Bidder shall note that, this list is not exhaustive and they may be required to provide additional T&Ps not stated in the list for proper execution of job, at no extra cost to BHEL.
2.0	MMD and T&P shall be mobilized and deployed by successful bidder, as required at site for successful execution of the job. Deployment plan of T&P, MMD shall be jointly finalised based on project requirement prior to start of work. The plan might undergo revision depending on project requirement. Depending upon the jointly agreed deployment program, any additional T&P, MMD, if required, for proper completion of job, shall have to be deployed by successful bidder. Similarly, if any of the aforesaid items is not required for the job as per jointly agreed program, successful bidder need not have to deploy

	the same.
3.0	Apart from above, in case successful bidder fail to deploy other T&Ps as per jointly agreed schedule, BHEL reserve the right to deploy the same at the risk & cost of successful bidder or levy penalty at a rate, to be rationally derived by BHEL. Decision of BHEL shall be final & binding on successful bidder.
4.0	The contractor shall ensure deployment of reliable & calibrated instrument, measuring and test equipment (MMD). The MMD shall have test calibration certificate from authorized/ Govt approved agencies. The contractor shall also keep provision of alternate engagement for such MMD so that the work does not suffer when a particular MMD is sent for calibration. Re-testing/ re-calibration shall also be arranged by the contractor at their own cost at regular interval during the period of use as advised by BHEL.
5.0	Sufficient measures shall be taken by the successful bidder to minimise the radiography test at site and maximise the use of Ultrasonic testing wherever applicable.
6.0	The above major T&P list is indicative only. Additional T&Ps, if required have to be mobilized by the successful bidder within the accepted rate.
7.0	In addition to the above necessary lifting tackles like slings, D-shackles, chain pulley blocks, tripods etc. are to be arranged by bidder. T&P shown in the above mentioned list are minimum requirement. Further requirement will be reviewed time to time at site and vendors will provide additional T&P/ equipments to ensure completion of entire work within schedule time without any financial implication to BHEL. Vendor will give advance intimation & certification regarding capacity etc prior to dispatch of heavy equipment.

ANNEXURE-VITENTATIVE LIST OF CONSUMABLES /PROTECTIVE MATERIAL AS REQUIRED TO BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST

SL NO	DESCRIPTION OF ITEMS
01	Electrodes & Filler Wire for CS, SS, AS – As required except for the special electrodes supplied by BHEL manufacturing units.
02	Different gases like O2, CO2, Nitrogen, Argon, D/A, etc.
03	CTC, petrol, diesel, kerosene, Rustolene.
04	Lapping pastes.
05	NDE consumables.
06	Hoses and clamps of different sizes.
07	Touch-up paints, preservatives and other consumables.
08	Cotton wastes, jutes etc.
09	Primer and finish paint (To be sourced from BHEL approved manufacturer).
10	Grouting cement as applicable.
11	Other consumables to complete the job.
12	All materials including cement, reinforcement steel, structural steel, AC sheeting, Windows, doors, MS/ Aluminum fittings, plastering, painting, flooring, roofing, etc, complete as per drawings, specification, etc, as required for construction of the pit.

## NOTE

1.0	Bidder shall note that this list is not exhaustive and they may be required to provide additional consumables not stated in list for proper execution of job, at no extra cost to BHEL. Successful bidder may have to provide nut, bolt, washer, etc. as referred in exceptional cases in case of any shortage of supply from BHEL's end. Accordingly, total implication in this regard is insignificant in comparison to total magnitude of work and bidder may work out implication of these items base on their previous exposure.
2.0	Deployment plan of major consumables shall be jointly finalised based on project requirement prior to start of work. The plan might undergo revision depending on project requirement. Depending upon the jointly agreed deployment program, any additional consumables, if required for proper completion of job, shall have to be deployed by the successful bidder. Similarly, if any of the aforesaid items is not required for the job as per jointly agreed program, the successful bidder need not have to deploy the same.

ANNEXURE-VIISPECIFICATION OF PAINTING WORK

1.0	The following Indian Standards may be referred to for carrying out the painting job: IS - 1303, 2379, 1477, 2524, 2395, 2338, 6278, 3140, 158, 2074, 104, and 2932.
2.0	All surfaces to be painted shall be thoroughly cleaned of all grease, oil, loose mill scale, dust, rust and any other foreign matter by mechanical cleaning with power tool, scrapping with steel wire brushes, and sand scrapping with wire brush/emery paper as per requirement. Cleaning with solvents shall be adopted only after approval of the customer.
3.0	After the surface is prepared, one coat of Zinc Phosphate primer conforming to IS: 2074 shall be applied. After first coat is dried up completely, second coat of red oxide primer shall be applied by brushing to ensure continuous film. The dry film thickness of each coat shall be minimum 25 microns.
4.0	Synthetic enamel paint conforming to IS: 2932 shall be used for finish coats. The color/ shade shall be as approved by the customer. After cleaning the dust on the dried up primer, first coat of synthetic enamel shall be applied. After this first coat dries up hard, the surface should be wet scrubbed cutting down to smooth finish and ensuring that at no place the first coat is completely removed. After applying second coat, allowing the water to get evaporated completely, third finish coat of painting shall be applied.
5.0	For all electrical equipment, powder coating shall be done as per the relevant standard.
6.0	Painting and Marking/Labeling of the materials erected. Supply of paints is included in the Scope of Work of the Sub-contractor.

Annexure-VIIITENTATIVE UNIT WISE COMPLETION SCHEDULE (IN DAYS) FOR DE-NOX SYSTEM OF U#5, 6, 7 AT NTPC  
KAHALGAON

SI No	Description of area/major milestones	U#5		U#6		U#7	
		Start	Finish	Start	Finish	Start	Finish
1.	Material Handling						
2.	Pre Shutdown Activities (25 Days/Unit)	04/07/2020	28/07/2020	02/12/2020	26/12/2020	01/04/2021	25/04/2021
3.	Shutdown/Renovation activities of Boiler De-Nox System (35 Days/Unit)	29/07/2020	01/09/2020	27/12/2020	30/01/2021	26/04/2021	01/06/2021
4.	Post Shutdown Commissioning Activities/Completion of All facilities (60 Days/Unit)	02/09/2020	31/10/2020	31/01/2021	31/03/2021	02/06/2021	24/07/2021

Note:

1. The above schedule is tentative only. The shutdown month/date, Unit number may get pre-ponnd/post pond, vendor will have to arrange full mobilization as per intimation of BHEL site I/C.
2. "Finish" means last day of completion of the period of particular activity.
3. Agency has to deploy resources to carry out parallel work in all units (if needed).
4. Agency should also be geared up to take up shut down works in both units/multiple units simultaneously, if such need arises.

## Annexure -IX

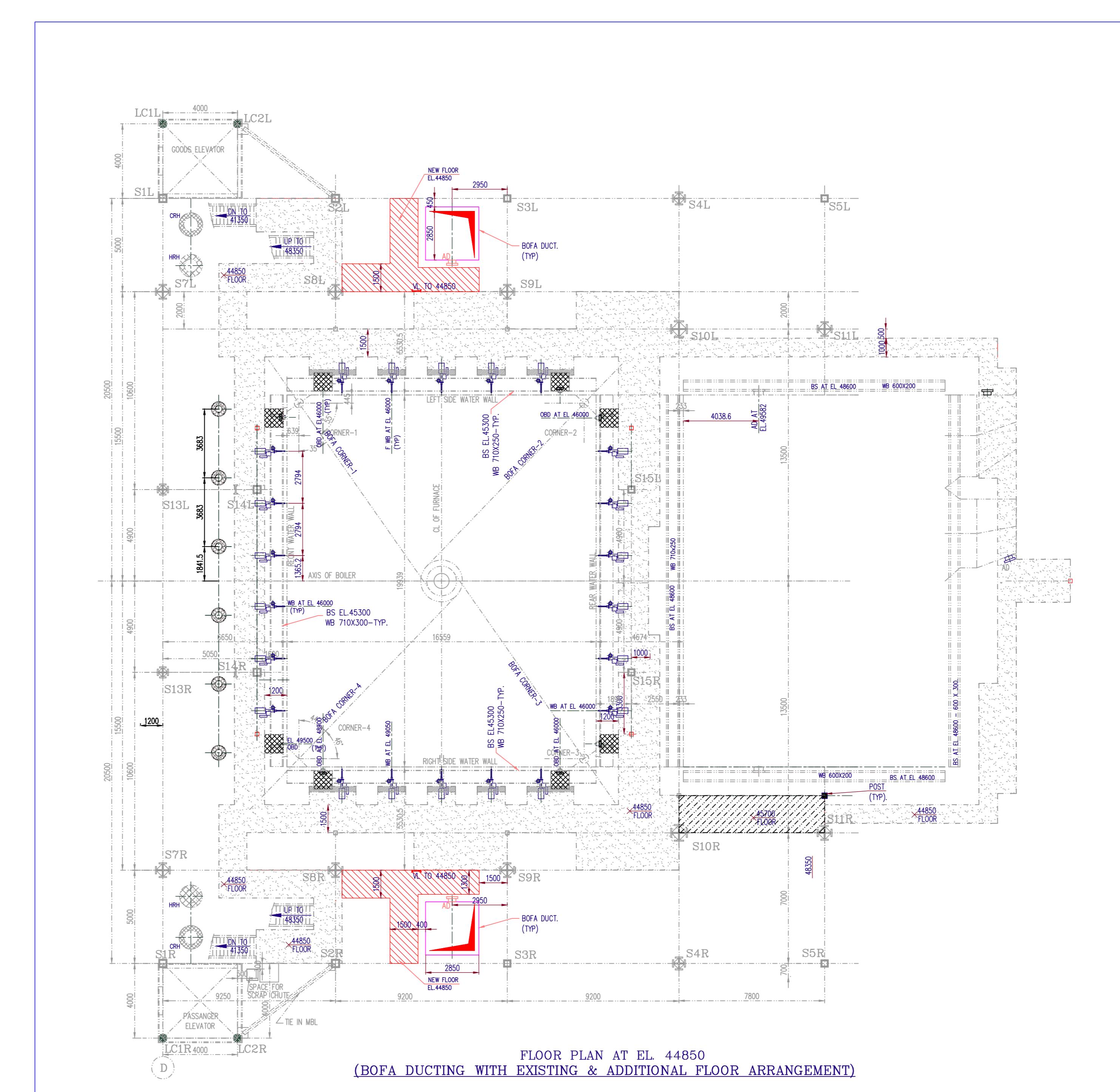
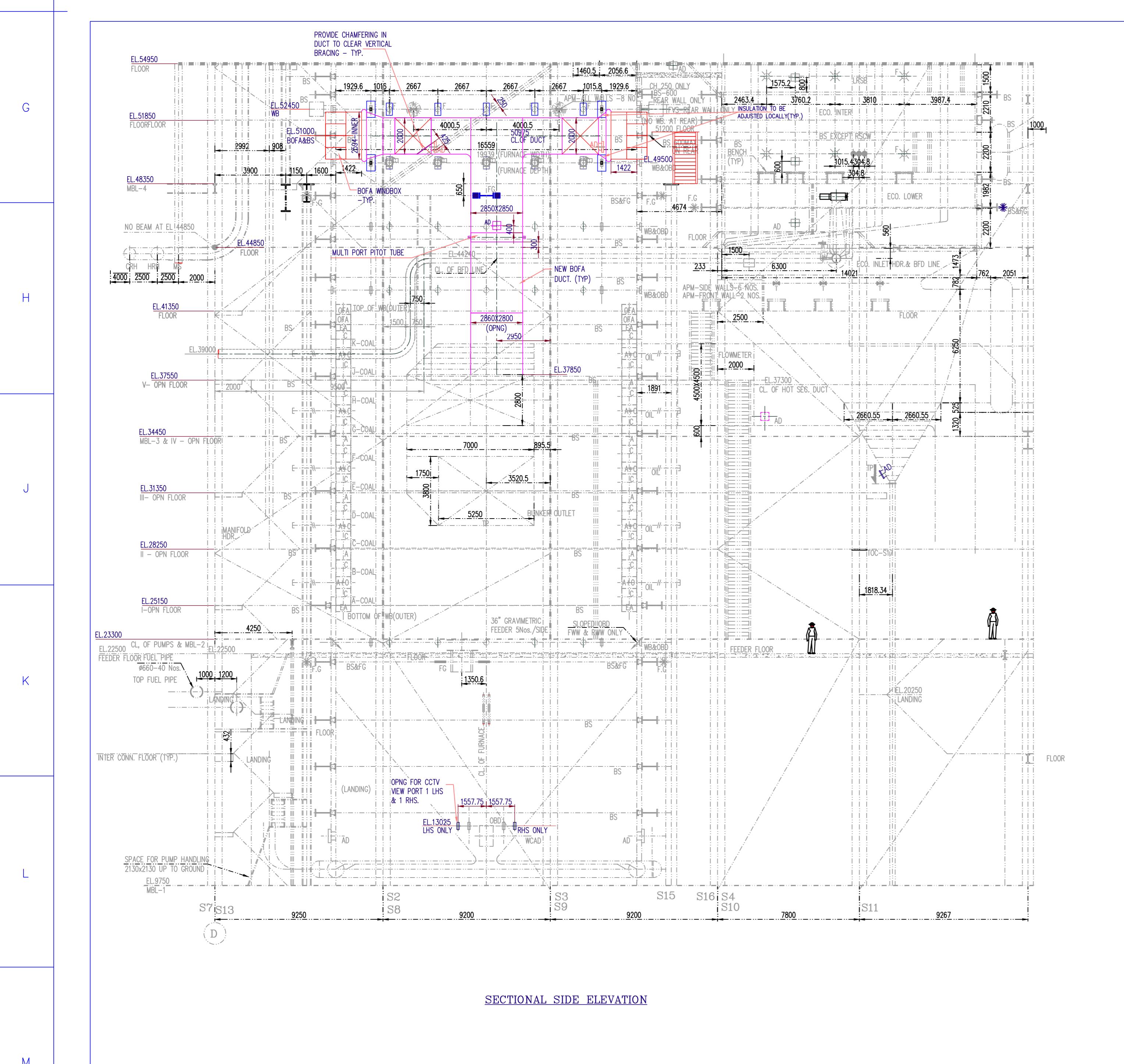
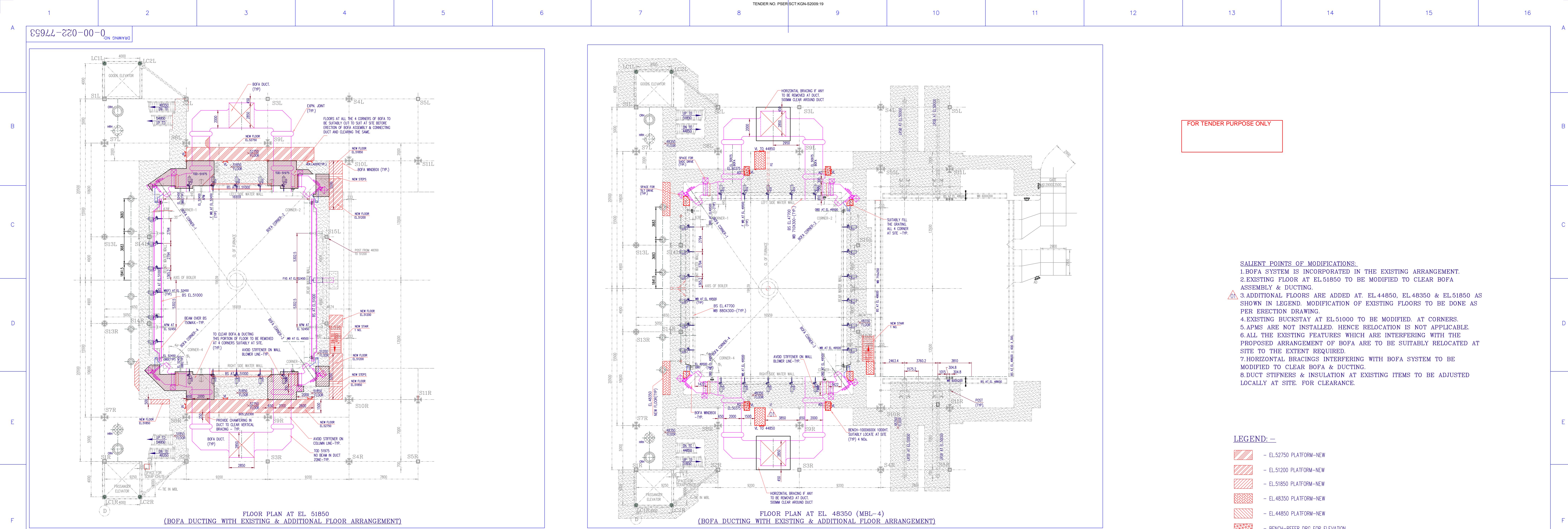
**Receipt, unloading, storage, Dismantling, New Material Erection, Re-Erection of Old Items, Modification of existing Items, Restoration, Commissioning, Testing & PG Test of Combustion modification system for Nox mitigation at U#5,6 & 7 at NTPC -KAHALGAON (3x500 MW).**

List of **Minimum manpower** required for the job is mentioned below. Contractor is to depute sufficient manpower to ensure round the clock working

MANPOWER	CATEGORY	MINIMUM NO. OF MANPOWER PER UNIT	
		DURING SHUTDOWN	DURING PRE-SHUTDOWN
Safety Engr	Highly Skilled	1	1
Quality Engr/Quality Supervisor	Skilled	1	1
Engineer/Supervisor(Mechnaical)	Skilled	3	1
Engineer/Supervisor(C&I)	Skilled	1	1
HP Welder(IBR)	Highly Skilled	3	1
Welder(Non-IBR)	Skilled	4	1
Structural welder	Skilled	2	2
fitter(Pressure parts)	Highly Skilled	2	1
fitter(Ducts)	Skilled	2	2
fitter(Structures)	Skilled	2	1
Gas cutter	Skilled	4	2
Sarang	Skilled	2	2
Electrician	Skilled	4	1
Jr. Fitter	Semi-Skilled	4	2
Grinder	Semi-Skilled	4	2
Rigger	Un-skilled	12	8
Helper	Un-skilled	26	8
Expert for Boiler Pr Parts&Burner	Expert	1	-
	<b>Total</b>	<b>79</b>	<b>38</b>
Site In Charge	Highly skilled	1 no. (for three units)	
MM – supervisor	skilled	1 no. (for three units)	
Store keeper	Semi skilled	1 no. (for three units)	

Note: 1) The above list is for tentative minimum required manpower for the subject job. During execution, as per requirement vendor has to mobilize sufficient manpower to complete the job as per shutdown schedule. In case vendor failed to mobilize sufficient manpower, BHEL shall arrange the same at the risk & cost of the vendor with applicable Overhead.

2) Time is the essence of this contract. Hence contractor must mobilize site with adequate manpower for round the clock 12 hours shifts work during the entire duration.



**R & M CONTRACT.**

OLD CUST. NO.: 0626, 0627 & 0629	CUSTOMER NO.: 4241, 4242 & 4243
NTPC DRG. NO.: 4230-103-PVM-W-004	
NATIONAL THERMAL POWER CORPORATION LTD.	
KAHALGAON SUPER THERMAL POWER PROJECT	
UNITS: 5, 6 & 7 STAGE-II, PHASE-1&2 (3X300 MW)	
LOT-1 COMBUSTION & FURNACE PACKAGE	
BOILER PLANT UNIT	
TIRUCHIRAPPALI - 620 014	
APPD. KAPALANAYAN	

TO \_\_\_\_\_  
 No. OF \_\_\_\_\_  
 REV. 01 DATE 03.09.2019 ALTD. KMANO. CHD. KAP. APPD. KAP.

REvised AS PER NTPC COMMENTS.

DRAWING NO. 0-00-022-77653

SCALE 1:150 DRG. NO. \_\_\_\_\_

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**FOR TENDER PURPOSE ONLY**

**3. SALIENT POINTS OF MODIFICATIONS:**

- BOFA SYSTEM IS INCORPORATED IN THE EXISTING ARRANGEMENT.
- EXISTING FLOOR AT EL.51850 TO BE MODIFIED TO CLEAR BOFA AS SHOWN IN LEGEND. MODIFICATION OF EXISTING FLOORS TO BE DONE AS PER ERECTION DRAWING.
- ADDITIONAL FLOORS ARE ADDED AT EL.44850, EL.48350 & EL.51850 AS SHOWN IN LEGEND. MODIFICATION OF EXISTING FLOORS TO BE DONE AS PER ERECTION DRAWING.
- EXISTING BUCKSTAY AT EL.51000 TO BE MODIFIED AT CORNERS.
- APMS ARE NOT INSTALLED. HENCE RELOCATION IS NOT APPLICABLE.
- ALL THE EXISTING FEATURES WHICH ARE INTERFERING WITH THE PROPOSED ARRANGEMENT OF BOFA ARE TO BE SUITABLY RELOCATED AT SITE TO THE EXTENT REQUIRED.
- HORIZONTAL BRACINGS INTERFERING WITH BOFA SYSTEM TO BE MODIFIED TO CLEAR BOFA & DUCTING.
- DUCT STIFFNERS & INSULATION AT EXISTING ITEMS TO BE ADJUSTED LOCALLY AT SITE FOR CLEARANCE.

**LEGEND:**

- EL.52750 PLATFORM-NEW
- EL.51200 PLATFORM-NEW
- EL.51850 PLATFORM-NEW
- EL.48350 PLATFORM-NEW
- EL.44850 PLATFORM-NEW
- BENCH-REFER DRG FOR ELEVATION

AD ----- ACCESS DOOR

VL ----- VERTICAL LADDER

BS ----- BUCKSTAY

BOFA ----- BYPASSED OVERFIRE AIR

**REFERENCE DRAWING NUMBERS:**

PHASE- I (0626 & 0627)	PHASE- II (0629)
1. GA OF BOILER SEC. SIDE ELEVATION	- 0-00-022-72712
2. GA OF BOILER PLAN (SEC.AA)	- 0-00-022-72713
3. LAYOUT OF HOT AIR DUCTING (ELEVATION)	- 0-00-020-72722
4. LAYOUT OF HOT AIR DUCTING (PLAN)	- 0-00-020-72724
5. FLOOR PLAN AT EL.41350	- 0-00-021-72738
6. FLOOR PLAN AT EL.44850	- 0-00-021-72739
7. FLOOR PLAN AT EL.48350	- 0-00-021-72740
8. FLOOR PLAN AT EL.51850	- 1-00-021-70557

**Bharat Heavy Electricals Limited**  
 Power Sector – Eastern Region, Kolkata  
**TENDER NO. PSER:SCT:KGN-S2009:19**

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## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter - I : General Intent of Specifications

<b>1.0 INTENT OF THE SPECIFICATION</b>	
1.1	The intent of this erection specification is to provide services for execution of the project according to most modern and proven techniques and codes. The omission of specific reference to any method, equipment or material necessary for the proper and efficient services towards installation of the plant shall not relieve the contractor of the responsibility of providing such services / facilities to complete the work or portion of work awarded to him. The quoted / accepted rates / price shall deem to be inclusive of all such contingencies.
1.2	The work shall conform to dimensions and tolerances given in various drawings and documents that will be provided during erection. If any portion of works is found to be defective in workmanship and not conforming to drawings / documents or other stipulations, the contractor shall dismantle and re-do the work duly replacing the defective materials at their own cost, failing which recoveries, as determined by BHEL, shall be effected from contractor's bills.
1.3	It is not the intent of this specification to specify herein all the details of erection and commissioning. However, the system shall conform in all respects to high standards of quality and workmanship for performing the required duties in a manner acceptable to purchaser who will interpret the meaning of drawings and specifications and shall be entitled to reject any work or material, which in his judgments is not in full accordance herewith.
1.4	The omission of specific reference to any fabrication / erection or other method, equipment or material necessary for proper and efficient working of the plant shall not relieve the tenderer of the responsibility of providing such facilities to complete the work at quoted rates. Any mismatch/ defect found due to mistake in fabrication / erection shall have to be rectified by the vendor free of cost. Inspection by BHEL/Customer does not relieve vendor of his responsibility of executing quality erection.
1.5	The work covered under this specification is of highly sophisticated nature, requiring the best quality workmanship, supervision, engineering and construction management. The contractor should ensure proper planning and successful and timely completion of the work to meet the overall project schedule. The contractor must deploy adequate quantity of tools & plants, modern / latest construction aids etc. He must also deploy adequate trained, qualified and experienced supervisory staff and skilled personnel.

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter - I : General Intent of Specifications

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1.6	Contractor shall erect and commission all the equipments and auxiliaries as per the sequence & methodology prescribed by BHEL depending upon the technical requirements. Availability of materials and fronts will decide this. BHEL Engineer's decision regarding correctness of the work and method of working shall be final and binding on the contractor. No claims for extra payment from the contractor will be entertained on the ground of deviation from the methods / sequence adopted in erection of similar sets elsewhere.
1.7	Following shall be the minimum responsibility of contractor and have to be provided within finally accepted rates / prices:
1.7.1	Provision as required of all types of labour, supervisors, engineers, watch and ward, tools & tackles, calibrated MMEs (Monitoring and Measuring Equipment) as specified and otherwise required for the work, consumables for erection, testing and commissioning including material handling
1.7.2	Achieving Proper out-turn / Turn-over as per BHEL plan and commitment.
1.7.3	Completion of work as per BHEL Schedule
1.7.4	Good quality and accurate workmanship for proper performance of the equipment
1.7.5	Repair and rectification
1.7.6	Preservation / Re-conservation of all components during storage / erection / commissioning till handing over.

**SPECIAL CONDITIONS OF CONTRACT (SCC)**  
**Chapter - II : General Services to be rendered by the Bidder**

<b>2.0</b>	<b>GENERAL SERVICES TO BE RENDERED BY THE BIDDER</b>
2.1	Services for construction, fabrication, equipment erection testing as well as trial run & commissioning of various equipment and accessories under the contract shall include but not be limited to the following:
2.2	Issuing materials from store/open yard from time to time for erection as per the construction programme. The Contractor shall be the custodian of all the materials issued till the plant/equipment is officially taken over by the owner / BHEL after complete erection any successful trial run & commissioning.
2.3	Transport of material to their respective places of erection and erection of the complete plant & equipment as supplied under this specification.
2.4	Trial run and commissioning of individual equipment / sub-systems to the satisfaction of Owner/BHEL.
2.5	Deployment of all skilled and unskilled manpower required for erection, supervision of erection, watch & ward, commissioning and other services to be rendered under this specification.
2.6	Deployment of all erection tools & tackle, construction machinery, transportation vehicles and all other implements in adequate number and size, appropriate for the erection work to be handled under scope of this specification except otherwise specified.
2.7	Supply of all consumables, eg welding electrodes, cleaning agents, diesel oil, lubricant etc as well as materials required for temporary supports, scaffolding etc as necessary for such erection work, unless specified otherwise.
2.8	Providing support services for the contractor's erection staff eg construction of site offices, temporary stores, residential accommodation and transport to work site for erection personnel, watch and ward for security and safety of the materials under the Contractor's custody etc. as required.
2.9	Maintaining proper documentation of all the site activities undertaken by the Contractor as per the proforma mutually agreed with BHEL, Submission of monthly progress reports and any such document as and when desired by BHEL/owner, taking approval of all statutory authorities i.e Boiler Inspector, Factory Inspector, Inspector of Explosives etc , as applicable for respective portions of work fall under the jurisdiction of such statutes of laws.
2.10	Any other service, although not specifically called for but required for a contract of the size and nature indicated in the specification.

**SPECIAL CONDITIONS OF CONTRACT (SCC)**  
**Chapter - III : General Technical Requirements (Codes and Standards)**

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<b>3.0 GENERAL TECHNICAL REQUIREMENTS (CODES AND STANDARDS)</b>	
3.1	Except where otherwise specified, the plant/equipment shall comply with the appropriate Indian Standard or an agreed internationally accepted Standard Specification as mentioned elsewhere in contract specifications, each incorporating the latest revisions at the time of tendering. Where no internationally accepted standard is applicable, the Bidder shall give all particulars and details as necessary, to enable BHEL to identify all of the plant/equipment in the same detail as would be possible had there been a Standard Specification.
3.2	Where the Bidder proposes alternative codes or standards he shall include in his tender one copy (in English) of each Standard Specification to which materials offered shall comply. In such case, the adopted alternative standard shall be equivalent or superior to the standards mentioned in the specification.
3.3	In the event of any conflict between the codes and standards referred above, and the requirements of this specification, the requirements which are more stringent shall govern.
3.4	Tools used during erection and commissioning shall not be accepted except with the specific approval of the Engineer.

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter - IV : Obligations of Contractor

4.0	<b>OBLIGATIONS OF CONTRACTOR</b>
4.1	<b>CONSUMABLES &amp; OTHER ITEMS</b>
4.1.1	The contractor shall provide within finally accepted price / rates, all consumables (excepting those indicated in BHEL scope) like welding electrodes (including alloy steel and stainless steel), filler wires, TIG filler wires (over & above as supplied by the unit along with the plant materials, which will be given free of cost to bidder), gases (inert, welding, cutting), soldering material, dye penetrants, radiography films, etc. Other erection consumables such as tapes, jointing compound, grease, mobile oil, M-seal, Araldite, petrol, CTC / other cleaning agents, grinding and cutting wheels are to be provided by the contractor. Steel, packers, shims, wooden planks, scaffolding materials hardware items etc required for temporary works such as supports, scaffoldings are to be arranged by the contractor. Sealing compounds, gaskets, gland packing, wooden/concrete sleepers, for temporary work, required for completion of work except those which are specifically supplied by manufacturing unit are also to be arranged by the contractor.
4.1.2	All the shims, gaskets and packing, which go finally as part of plant equipment, shall be supplied by BHEL free of cost.
4.1.3	It shall be the responsibility of the contractor to plan the activities and store sufficient quantity of consumables. Non-availability of any consumable materials or equivalent suggested by BHEL cannot be considered as reason for not attaining the required progress or for additional claim.
4.1.4	<b><u>TIG Filler wire for Boiler and Filler wires for Electrodes for P91/T91 piping:</u></b> These shall be supplied by BHEL free of cost as supplied by BHEL Manufacturing Units as part of regular supply. Required quantity as arrived at by calculation / standards will only be supplied. It would be the contractors' responsibility to account for the consumption of these filler wires. Additional consumption beyond standard / calculated quantity will be at cost recovery basis only unless and otherwise accounted for. Surplus quantity of TIG filler wire, if any, shall be properly stored and returned to BHEL stores.
4.1.5	It shall be the responsibility of the contractor to obtain prior approval of BHEL, regarding suppliers, type of electrodes etc before procurement of welding electrodes. On receipt of electrodes at site these shall be subjected to inspection and approval by BHEL. The contractor shall inform BHEL details regarding type of electrodes, batch number, date of expiry etc and produce test certificate for each lot / batch with correlation of batch / lot number with respective test certificate. No

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter - IV : Obligations of Contractor

	electrode without a valid test certificate will to be used.
4.1.6	BHEL reserves the right to reject the use of any consumable including electrodes, gases, lubricants / special consumables if it is not found to be of the required standard / make / purity or when shelf life has expired. Contractor shall ensure display of shelf life on consumable wherever required and records maintained.
4.1.7	Storage of all consumables including welding electrodes shall be done as per requirement / instruction of the Engineer by the contractor at his cost.
4.1.8	In case of improper arrangement for procurement of any consumable, BHEL reserves the right to procure the same from any source and recover the cost from the Contractor's first subsequent bill at market value plus the departmental charges of BHEL from time to time. Postponement of such recovery is normally not permitted. The decision of Engineer in this regard shall be final and binding on the Contractor.
4.1.9	All lubricants and chemicals required for pre-commissioning, commissioning, testing, preservation and lubricants for trial runs of the equipment shall be supplied by BHEL / BHEL's client. All services including labour and T&P will be provided by the contractor for handling, filling, emptying, refilling etc. The consumption of lubricants / chemicals shall be properly accounted for. Surplus material if any shall be properly stacked/tagged and returned to BHEL/ CUSTOMER stores at no extra cost to BHEL. BHEL reserves the right to recover costs for wastage by the contractor.
4.1.10	Transportation of oil drums, from stores, filling of oil for flushing, first filling, subsequent changeover if any, topping/making up till the unit is fully commissioned and handed over to customer is included in scope of this contract. The contractor shall have to return all the empty drums to BHEL / BHEL's client store at no extra cost. Any loss / damage to above drums shall be to contractor's account.
4.1.11	All charges on account of Octroi, terminal or sales tax and other duties on materials obtained from any source for carrying out the works in the scope of the contractor shall be borne by the contractor.
4.2	<b>TOOLS AND PLANTS / MONITORING AND MEASURING EQUIPMENT (MMEs)</b>
4.2.1	<b>T&amp;Ps and MMEs to be provided by Contractor</b>
4.2.1.1	All T&Ps and MMEs excepting those specifically indicated in BHEL scope are to be provided by the Contractor. Contractor has to make his own arrangement at his cost for completing the formalities (including arrangement of Road permits, if any) if required with Sales Tax/VAT authorities, for bringing their materials, plants and

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter - IV : Obligations of Contractor

	equipments at site for the execution of work under this contract.
4.2.1.2	All suitable cranes, lifting and transport equipments for material handling at stores/yard/siding of BHEL/Customer are included in scope. BHEL's cranes will not be available for this purpose unless otherwise specifically permitted as per contract conditions
4.2.1.3	All T&Ps to be deployed by the contractor shall have the approval of BHEL Engineer with regard to brand, quality and specification.
4.2.1.4	Indicative list of Major T&Ps in the scope of Contractor are given in the Technical Conditions of Contract. Bidders to note that these are only indicative and as such all other T&P necessary for timely and satisfactory completion of work in scope shall be mobilized by Contractor
4.2.1.5	Timely deployment of adequate T&Ps is the responsibility of the contractor. The contractor shall be prepared to augment the T&P at short notice to match the planned programme and to achieve the milestones.
4.2.1.6	Contractor shall maintain and operate his tools and plants in such a way that major breakdowns are avoided. In the event of major breakdown, contractor shall make alternative arrangements expeditiously so that the progress of work is not hampered.
4.2.1.7	In the event of contractor failing to arrange the required tools, plants, machinery, equipment, material or non-availability of the same owing to breakdown, BHEL will make alternative arrangement at the risk and cost of the contractor. Decision of BHEL shall be final and binding on the contractor
4.2.1.8	The T&P to be arranged by the contractor shall be in proper working condition and their operation shall not lead to unsafe condition. The movements of cranes, and other equipment should be such that no damage / breakage occurs to foundations, other equipments, material, property and men. All arrangements for the movement of the T&P etc shall be the contractor's responsibility.
4.2.1.9	Use of welding generators/ rectifiers only shall be permitted for welding. Use of welding transformers will be subject to specific approval of BHEL engineer.
4.2.1.10	The contractor at his cost shall carry out periodical testing of his construction equipments. Test certificates shall be furnished to BHEL.
4.2.1.11	Contractor shall ensure deployment of serviced and healthy T&Ps including cranes, lifting tackles, wire ropes, manila ropes, winches and slings etc. History card and maintenance records for major T&Ps will be maintained by the contractor and will be made available to BHEL Engineer for inspection as and when required.

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter - IV : Obligations of Contractor

	<p>Fitness certificate / Test Certificates of T&amp;P shall have to be submitted before it is put in use. Identification for such T&amp;Ps will be done as per BHEL Engineer's advice.</p> <p>BHEL reserves the right to permit only new slings up to 20 mm and lifting tackles up to 3 MT capacities.</p>
4.2.1.12	Contractor shall ensure deployment of reliable and calibrated MMEs (Inspection measuring and Monitoring equipment). The MMEs shall have test / calibration certificates from authorized / Government approved / accredited agencies traceable to National / International standards. Each MME shall have a label indicating calibration status i.e. date of calibration, calibration agency and due date for calibration. A list of such instruments deployed by contractor at site with its calibration status is to be submitted to BHEL Engineer for control.
4.2.1.13	Re-testing / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the contract price. The contractor will also have alternate arrangements for such MME so that work does not suffer when the particular instrument is sent for calibration. If any MMEs not found fit for use, BHEL shall have the right to stop the use of such item. It will be necessary for the contractor to deploy proper item. Any readings taken by the defective instrument will be recalled and repeat the readings taken by that instrument with a proper one. In case he fails to do so, BHEL may deploy MMEs and retake the readings at contractor's cost.
4.2.1.14	BHEL shall have lien on all T&P, MMEs and other equipment of the contractor brought to the site for the purpose of erection, testing and commissioning. BHEL shall continue to hold the lien on all such items throughout the period of contract / extended period. The contractor and / or his sub-contractors, without the prior written approval of the Engineer, shall remove no material brought to the site.
4.2.1.15	The month wise T&P deployment plan to execute the work is to be submitted as per relevant format as per the instruction of BHEL. It shall be the contractor's responsibility to deploy the required T&P, for timely and successful completion of the job, to any extent.
4.2.2	<b>Obligations in respect of T&amp;Ps and MMEs provided by BHEL</b>
4.2.2.1	T&P / MMEs being provided by BHEL to sub-contractor free of hire charges shall be shared by other subcontractors working for BHEL at site and the allotment done by BHEL Engineer shall be final and binding.
4.2.2.2	BHEL T&P will be issued in basic assembled condition. Additional loose components / sub-assemblies / attachments as and when necessary, will be

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter - IV : Obligations of Contractor

	issued by BHEL. Assembly of such additional loose components/sub-assemblies/ attachments is in contractor's scope.
4.2.2.3	In case of non-availability of the T&Ps to be provided by BHEL due to breakdown, major overhauls, distribution pattern or any other reason, the contractor shall plan / amend / alter his activities to meet erection / commissioning targets in consultation with BHEL.
4.2.2.4	void
4.2.2.5	The contractor shall engage trained and experienced operators for the operation of BHEL's T&Ps. Their skill / performance will be checked by BHEL Engineer before they are allowed to operate the same. However checking of skills by BHEL does not absolve the contractor of his responsibilities for proper and safe handling of equipment, consistent good performance of operators and regular performance evaluation of operators.
4.2.2.6	<p>The day to day operation and maintenance of BHEL's T&amp;Ps (<b>Other than cranes</b>) shall be carried out by contractor as per manufacturer's / BHEL's maintenance schedule at his cost. The contractor shall arrange, at his own cost, trained operators, fuel and other consumables for their operation. BHEL shall arrange all spares needed for upkeep of major T&amp;Ps provided like Huck Bolting Machine*, DG Set, Induction Machine and Hydraulic Test pumps. The contractor has to arrange for fixing of the spares; supervision in specialized cases will be provided by BHEL. For upkeep of all other T&amp;Ps supplied by BHEL, spares shall be arranged by the Contractor. BHEL supplied T&amp;Ps shall be maintained in good working condition during the entire period of use. T&amp;Ps in defective / damaged condition shall be rectified promptly to the full satisfaction of BHEL engineer. Contractor shall maintain records for maintenance of major T&amp;Ps. These shall be made available for Inspection whenever required. In case of any lapses on the part of the contractor, BHEL at its own discretion shall get the servicing / repair of equipment done at the risk and cost of the contractor along with BHEL overheads. Further, if there are breakdowns / damages due to negligence of the contractor, the complete service / repair charges and cost of all the spares damaged with BHEL overheads shall be recovered from contractor's RA bills.</p> <p>*: for operation and maintenance of ESP Huck bolting machine, BHEL shall provide the basic power rig and hose. Balance toolingsie Guns, chuck jaws etc are to be arranged by contractor.</p>
4.2.2.7	void

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter - IV : Obligations of Contractor

4.2.2.8	Increasing / shortening of the crane boom to suit work requirements shall have to be arranged by the indenting contractor at his cost including restoration to a state as directed by BHEL. All necessary manpower tools, support, consumables, illumination etc. will have to be arranged by contractor at his cost. If required, contractor has to return the crane with original boom.
4.2.2.9	The area and infrastructure development of the area to be carried out by the customer. However in construction projects of this magnitude it is possible that all the areas / approaches may not be ready. In such cases backfilling of approaches where ever necessary, consolidation of ground and arrangement of sleepers / sand bag filling etc for safe operation / movement of equipment including cranes / trailers etc shall be the responsibility of the contractor at his cost. No compensation on this account shall be payable.
4.2.2.10	In the event of contractor not using and maintaining BHEL T&Ps according to BHEL's instructions. BHEL will have the right to withdraw such item without any notice and no claim in this regard shall be entertained and contractor shall be responsible for delay in execution on this account.
4.2.2.11	The contractor shall furnish regular utilization report of the BHEL T&Ps, as per requirement of BHEL.
4.2.2.12	Any loss / damage to any part of BHEL T&Ps and MMEs shall be to the contractor's account and any expenditure on these accounts by BHEL will be recovered from the contractor's bill in case the contractor fails to make good the loss.
4.2.2.13	It shall be responsibility of the contractor to take delivery of T&Ps and MMEs from stores or place of use by other contractor at project site, transport the same to site and return the same to BHEL store / place as intimated by Engineer in project site in good working conditions after use.
4.2.2.14	The contractor shall return BHEL T&Ps and MMEs issued to him in good working condition as and when desired by BHEL (on completion or reduction of workload). If contractor delays return of T&P and MME, hire charges as applicable shall be levied by BHEL from time, it was requisitioned till the time of actual return. T&Ps and MMEs returned in damaged / unserviceable condition shall be got repaired by BHEL at its own discretion and entire cost of repair with BHEL overheads shall be recovered from the contractor.
4.2.2.15	Replacement cost including BHEL overheads in respect of irreparable / completely damaged / non return of T&Ps and MMEs shall be recovered from the

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter - IV : Obligations of Contractor

	contractor's running / final bills
<b>4.2.2.16</b>	<b>Obligations in respect of Cranes provided by BHEL</b>
a)	BHEL will make available the cranes (as per Technical Conditions of Contract) free of charge to the contractor on sharing basis mainly for the purposes enumerated/indicated therein. BHEL cranes have to be shared with other agencies / contractors of BHEL. The allocation of cranes shall be the discretion of BHEL engineer, which shall be binding on the contractor.
b)	BHEL Cranes may be initially issued in basic assembled condition. Any alteration/addition like boom reduction / extension, assembly of components/sub-assemblies needed for modulating the capacity/reach/other features of cranes and restoration to the state as directed by BHEL shall be the contractor's responsibility.
c)	<p>In case the BHEL cranes are not covered under AMC of BHEL, then the day-to-day upkeep and running maintenance like filling / topping up of lubricants, changing filters, etc including repair of self starter and dynamo of these cranes shall be the responsibility of the contractor. If on checking it is found that the same is not followed, BHEL will exercise its right to get the job/works done at the risk and cost of contractor.</p> <p>In case BHEL cranes are covered under AMC awarded by BHEL, then the day-to-day upkeep and running maintenance as described above are excluded from scope. However any additional helpers if any required during Preventive/Breakdown Maintenance, Assembly/disassembly shall be provided by contractor at no extra cost.</p> <p>BHEL may also provide cranes through crane hiring agencies in which case the day-to-day upkeep and running maintenance shall be excluded from scope of contractor.</p>
d)	Minor consumables like cotton cloth, cotton waste, etc is to be supplied by Contractor. All spares and lubricants/grease is excluded from scope. Contractor to give the requirements of these items well in advance in case the cranes provided by BHEL are BHEL owned cranes.
e)	Unless otherwise specified, trained operators for BHEL owned cranes shall be provided by the contractor. These operators should possess valid license for heavy vehicle.
f)	BHEL cranes will be withdrawn for regular and capital maintenance as per the respective schedule of maintenance. As far as possible such schedules will be intimated to the contractor in advance and may be adjusted depending on the work

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter - IV : Obligations of Contractor

	requirements at site. However no claim whatsoever will be entertained on account of non-availability of cranes.
g)	Where the services of the cranes provided by BHEL are to be shared by other agencies/ contractors of BHEL, the contractor's responsibilities defined above will also be apportioned accordingly to the beneficiary agency. Working arrangements in this regard will be done at site by BHEL engineer and in any case his decision shall be final and binding.
h)	Major breakdowns will be attended to by BHEL. However, in case of breakdowns or damages due to negligence of the contractor, the complete service/repair charges including cost of spares shall be to the account of the contractor, along with BHEL overheads.
<b>4.2.2.17</b>	<b>Obligations in respect of Construction Lift/Elevators provided by BHEL</b>
a)	The total erection including commissioning, maintenance, statutory clearances shall be included in scope of work. Supervision by the original equipment supplier or their authorized agency shall be arranged for by BHEL, in case found necessary.
b)	All day to day and routine maintenance and checking is to be carried out by the contractor as per the recommendations of the supplier. He should periodically check the brakes and carry out the all works to ensure the safety of all those using the lift/elevator. BHEL shall arrange spares required for upkeep of Construction lift/elevator
c)	The construction lift/elevator should never be overloaded as this can lead to serious accidents. Ensuring all safety aspects in operation of the lift shall be the responsibility of the contractor. Erection of all the required number of landing platforms is included in scope. Landing platforms are to be provided with proper barricades and hand railings.
d)	After completion of contractual scope of work or as per BHEL advice, the temporary elevator/lift shall be dismantled and handed over to BHEL neatly identified/tagged. Temporary structures/platforms etc erected for the elevators/lifts are also to be dismantled and materials to be returned to stores as applicable. <b>The construction and dismantling of the foundations required for the construction/elevator lifts is included in the scope of the contractor.</b>

**SPECIAL CONDITIONS OF CONTRACT (SCC)**  
**Chapter – V : Responsibilities of Contractor in respect of Labour,  
Supervisory Staff, etc.**

<b>5.0</b>	<b>RESPONSIBILITIES OF CONTRACTOR IN RESPECT OF LABOUR, SUPERVISORY STAFF, ETC.</b>
5.1	Refer relevant clauses of General Conditions of Contract (GCC) also in this regard
5.2	The contractor shall deploy all the necessary skilled/semiskilled/ unskilled labour including highly skilled workmen etc. These workmen should have previous experience on similar job. They shall hold valid certificates wherever necessary. BHEL reserves the right to insist on removal of any employee of the contractor at any time if he is found to be unsuitable and the contractor shall forthwith remove him.
5.3	Contractor shall also comply with the requirements of local authorities/ project authorities calling for police verification of antecedents of the workmen, staff etc.
5.4	It is the responsibility of the contractor to engage his workmen in shifts and or on overtime basis for achieving the targets set by BHEL. This target may be set to suit BHEL's commitments to its customer or to advance date of completion of events or due to other reasons. The decision of BHEL in regard to setting the erection and commissioning targets will be final and binding on the contractor.
5.5	Contractor shall provide at different elevation suitable arrangement for urinal and drinking water facility with necessary plumbing & disposal arrangement including construction of septic tank. These installations shall be maintained in hygienic condition at all times.
5.6	The Contractor in the event of engaging 20 or more workmen, shall obtain Independent license under the Contract labour (Regulation and Abolition) Act 1970 from the concerned authorities based on Form-V issued by the Principal Employer/Customer. In order to issue Form-V by Customer, Contractor shall fulfill all Statutory requirements like Insurance Policy, PF Code/PF Account number etc as per the requirement of BHEL/Customer
5.7	Contractor shall deduct the necessary amount towards Provident Fund and contribute equal amount as per Government of India laws. This amount will be deposited regularly to the provident Fund Commissioner. BHEL/Customer may insist for submission of the account code duly certified by PF Commissioner
5.8	Contractor may also be required to comply with provisions of ESI Act in vogue if applicable and submit evidence to BHEL.
5.9	BHEL / customer may insist for witnessing the regular payment to the labour. They may also like to verify the relevant records for compliance with statutory

**SPECIAL CONDITIONS OF CONTRACT (SCC)**  
**Chapter – V : Responsibilities of Contractor in respect of Labour,  
Supervisory Staff, etc.**

	requirements. Contractor shall enable such facilities to BHEL / Customer.
5.10	Contractor shall deploy only qualified and experienced engineers/ supervisors. They shall have professional approach in executing the work.
5.11	The contractor's supervisory staff shall execute the work in the most professional manner in the stipulated time. Accuracy of work and aesthetic finish are essential part of this contract. They shall be responsible to ensure that the assembly and workmanship conform to dimensions and tolerances given in the drawings/instructions given by BHEL engineer from time to time.
5.12	The supervisory staff employed by the contractor shall ensure proper outturn of work and discipline on the part of the labour put on the job by the contractor. Also in general they should see that the works are carried out in a safe and proper manner and in coordination with other labour and staff employed directly by BHEL or other contractors of BHEL or BHEL's client.
5.13	It is the responsibility of the contractor to arrange gate pass for all his employees, T&P etc for entering the project premises. Necessary coordination with customer officials is the responsibility of the contractor. Contractor to follow all the procedures laid down by the customer for making gate passes. Where permitted, by customer / BHEL, to work beyond normal working hours, the contractor shall arrange necessary work permits for working beyond normal working hours.
5.14	The actual deployment will of Labour and Engineer/supervision staff shall be so as to satisfy the erection and commissioning targets set by BHEL. If at any time, it is found that the contractor is not in a position to deploy the required engineers/supervisors/workmen due to any reason, BHEL shall have the option to make alternate arrangements at the contractor's risk and cost. The expenditure incurred along with BHEL overheads thereon shall be recovered from the contractor
5.15	Contractor shall not deploy women labour at night.

**SPECIAL CONDITIONS OF CONTRACT (SCC)**  
**Chapter – VI: Material Handling, Storage & preservation**

<b>6.0</b>	<b>MATERIAL HANDLING, STORAGE AND PRESERVATION ETC</b>
<b>6.1</b>	<b>MATERIAL HANDLING AND STORAGE</b>
<b>6.1.1</b>	All the equipments/materials furnished under this contract shall be received from the project stores, sheds / storage yards and transported to pre assembly area / erection site and stored in the storage spaces in a manner so that they are easily retrievable till the contractor erects them. While drawing/lifting material from BHEL / customer stores, the contractor shall ensure that the balance / other materials are stacked back immediately. No claim is admissible on this account
<b>6.1.2</b>	While BHEL will endeavor to store / stack / identify materials properly in their open / close / semi closed / tarpaulins covered storage yard / shed, it shall be contractor's responsibility to assist BHEL in identifying materials well in time for erection. They should take the delivery of the same, following the procedure indicated by BHEL, and transport the material safely to pre-assembly yard / erection site in time, according to program.
<b>6.1.3</b>	The contractor shall take delivery of components, equipment / consumables from storage area after getting the approval of BHEL Engineer on standard indent forms.
<b>6.1.4</b>	The contractor shall identify and deploy necessary Engineers / supervisors / workmen for the above work in sufficient number as may be needed by BHEL, for areas covering their scope.
<b>6.1.5</b>	All the equipment shall be handled very carefully to prevent any damage or loss. No untested wire ropes / slings etc. shall be used for unloading / handling. The equipment shall be properly protected to prevent damage either to the equipment or to the floor where they are stored. The equipment from the stores shall be moved to the actual location at the appropriate time so as to avoid damage of such equipment at site.
<b>6.1.6</b>	Contractor shall ensure that while lifting slings shall be put over the points indicated on the equipment or as indicated in the manufacturer's drawings. Slings / shackles of proper size shall be used for all lifting and rigging purposes. All care shall be taken to safe guard the equipment against any damage. Dragging of piping / valves should be avoided. In case of any damage the cost shall be covered from the contractor.
<b>6.1.7</b>	Approach road conditions from the stores / yards to the erection site may not

**SPECIAL CONDITIONS OF CONTRACT (SCC)**  
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	be equipped and ideal for smooth transportation of the equipment. Contractor may have to be adequately prepared to transport the materials under the above circumstances without any extra cost. . The contractor may familiar himself with soil conditions at site.
6.1.8	Contractor shall be responsible for examining all the plant and materials issued to him and notify the Engineer immediately of any damage, shortage, discrepancy etc before they are moved out of the stores / storage area. The contractor shall be solely responsible for any shortages or damages in transit, handling, storage and erection of the equipment once received by him. As the erection work will be spread in different areas / locations of the project, contractor has to arrange sufficient number of watch / ward personal to avoid any pilferage of material
6.1.9	The contractor shall maintain an accurate and exhaustive record-detailing out the list of all equipment received by him for the purpose of erection and keep such record open for the inspection of the engineer at any time.
6.1.10	All the material in the custody of contractor and stored in the open or dusty locations must be covered with suitable weather proof / fire retardant covering material wherever applicable and shall be blocked up on raised level above ground. All covering materials including blocks and sleeper shall be arranged by the contractor at his cost.
6.1.11	If the material belonging to the contractor are stored in area other than those earmarked for his operation the engineer will have the right to get it moved to the area earmarked for the contractor at the contractors risk and cost.
6.1.12	The contractor shall be responsible for making suitable indoor storage facilities to store all equipment (drawn by the contractor from BHEL / customer stores), which require indoor storage till the time of their installation. The Engineer will direct the contractor in this regard, which item in his opinion will require indoor storage, and the contractor shall comply with Engineer's decision.
6.1.13	The contractor shall ensure that all surplus / damaged / scrap / unused material, packing wood / containers/ special transporting frames etc are returned to BHEL at a place in project area identified by the Engineer. The contractor will maintain an account for all items received and returned to BHEL. Any shortage in returning such items shall be chargeable to the contractor except allowable wastage for packing wood only.
6.1.14	The contractor shall hand over all parts / materials remaining extra over the normal requirement with proper identification tags to the stores as directed by

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**Chapter – VI: Material Handling, Storage & preservation**

	the concerned BHEL engineer.
6.1.15	The contractor shall ensure that all the packing materials and protective devices installed on equipment during transit and storage are removed before installation.
6.1.16	It shall be the responsibility of the contractor to keep the work / storage areas in neat, tidy and working conditions. All surplus/unusable packing and other materials shall be removed and deposited at location(s) specified by BHEL within the project premises. If required weighing of the same within the project premises will have to be carried out.
6.2	<b>PRESERVATION OF COMPONENTS</b>
6.2.1	After taking delivery from BHEL / customer's stores, plant materials storage shall be subjected to the following protection besides other provisions indicated in these specifications elsewhere.
6.2.1.1	Items stored outdoors shall be stacked up at least six inches (6") off the ground. Items should not be stored in a low lying area where water logging is a possibility. Contractor should have sufficient numbers of wooden / concrete / steel sleepers for the job.
6.2.1.2	Motors, valves, electrical equipment, control equipment and instruments, and special or precision items requiring special care,etc shall be stored indoors. Motor windings shall be kept dry by use of external heat or space heaters.
6.2.1.3	Bearings and other wearing surfaces of plant materials shall be protected against corrosion and kept clean and should be regularly monitored.
6.2.1.4	Insulation materials shall be stored indoors or otherwise protected against getting wet/ damaged, using suitable measures and should be protected from direct rain.
6.2.2	It shall be the responsibility of the contractor to apply preservatives / touch up paints (primer) on equipment handled and erected by him till such time of final painting. It shall be contractor's responsibility to arrange for required paints (primer), thinners, labour, scaffolding materials, cleaning materials like wire brush, emery sheets, etc, cleaning of surface and provide one coat of preservatives / paints (primer) from time to time as decided by BHEL engineer. The accepted rate shall include this work also. It is to be noted that such painting may have to be done as and when required till such time the final painting is carried out.
6.2.3	The contractor shall effectively protect the finished work from action of weather

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	and from damage or defacement and shall cover the finished parts then and there for their protection.
<b>6.2.4</b>	Any failure on the part of contractor to carry out works according to above clauses will entail BHEL to carry out the job from any other party and recover the cost from contractor.

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter – VII: Drawings and documents

7.0	DRAWINGS AND DOCUMENTS
7.1	The detailed drawings, specifications available with BHEL engineers 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.
7.2	Necessary drawings to carry out the erection work will be furnished to the contractor by BHEL on loan, which shall be returned to BHEL Engineer at site after completion of work. Contractor shall ensure safe storage and quick retrieval of these documents.
7.3	The contractor shall maintain a record of all drawings and documents available with him in a register as per format given by BHEL Engineer. Contractor shall ensure use of pertinent drawings / data / documents and removal of obsolete ones from work place and returning to BHEL.
7.4	The data furnished in various annexure 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. The contractors quoted rates shall be inclusive of the above factor
7.5	Should any error or ambiguity be discovered in the specification or information the contractor 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.
7.6	Deviation from design dimensions should not exceed permissible limit. The contractor shall not correct or alter any dimension / details, without specific approval of BHEL.

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### Chapter – VIII: Inspection and Quality

<b>8.0</b>	<b>INSPECTION AND QUALITY</b>
<b>8.1</b>	<b>Inspection, Quality Assurance, Quality Control</b>
<b>8.1.1</b>	Preparation of quality assurance log sheets and protocols with customer/consultants/statutory authority, welding logs, NDE records, testing & calibration records and other quality control and quality assurance documentation as per BHEL engineer's instructions, is within the scope of work/specification. These records shall be submitted to BHEL/customer for approval from time to time.
<b>8.1.2</b>	The protocols between contractor and customer/ BHEL shall be made prior to installation for correctness of foundations, materials, procedures, at each stage of installation, generally as per the requirement of customer/ BHEL. This is necessary to ensure elimination of errors or keeping them within tolerable limits and to avoid accumulation and multiplication of errors.
<b>8.1.3</b>	<p>A daily log book should be maintained by every supervisor/engineer of contractor on the job in duplicate (one for BHEL and one for contractor) for detailing and incorporating alignment/clearance / centering / leveling readings and inspection details of various equipments etc.</p> <p>High pressure welding details like serial number of weld joints, welders name, date of welding, details of repair, heat treatment etc. will be documented in welding log as per BHEL Engineer's instructions.</p> <p>Record of radiography containing details like serial number of weld joints, date of radiography, repairs, if any, re-shots etc shall also be maintained as per BHEL Engineer's instructions.</p> <p><b>Record of heat treatments performed shall be maintained as prescribed by BHEL</b></p>
<b>8.1.4</b>	The performance of welders will be reviewed from time to time as per the BHEL standards. Welders' performance record shall be furnished periodically furnished for scrutiny of BHEL's Engineer. Corrective action as informed by BHEL shall be taken in respect of those welders not conforming to these standards. This may include removal/ discontinuance of concerned welder(s). Contractor shall arrange for the alternate welders immediately
<b>8.1.5</b>	All the welders shall carry identity cards as per the proforma prescribed by BHEL/Customer/Consultant. Only welders duly authorized by

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter – VIII: Inspection and Quality

	BHEL/customer/consultant shall be engaged on the work.
8.1.6	Contractor shall provide all the Measuring Monitoring Equipments (MMEs) required for completion of the work satisfactorily. These MMEs shall be of brand, quality and accuracy specified by BHEL Engineer and should have necessary calibration and other certificates as per the requirement of BHEL Engineer. Decision of BHEL Engineer regarding acceptance or otherwise of the measuring instruments/gauges/tools for the work under this specification, is final and binding on the contractor. BHEL may give an indicative list of MMEs required for this work and to be made available by the contractor. The list will be reviewed by BHEL and the contractor shall meet any augmentation needed wherever required.
8.1.7	It is the responsibility of the contractor to prove the accuracy of the testing/measuring/calibrating equipments brought by him based on the periodicity of calibration as called for in the BHEL's quality assurance standards/BHEL Engineer's instructions.
8.1.8	Any re-laying or re-termination of cables/re-erection of instruments/recalibration of instruments etc. required due to contractor's mistake or design requirement and found at any stage inspection, shall be carried out by the contractor at no extra cost.
8.1.9	BHEL, Power Sector Regions (PSNR/PSER/PSWR/PSSR) have already been accredited with ISO 9001 certification and as such this work is subject to various audits to meet ISO 9001 requirements. One particular aspect which needs special mention is about arrangement of calibration of instruments by the contractor. Contractor shall ensure deployment of reliable and calibrated MMEs (Measuring and Monitoring Equipments). The MMEs shall have test / calibration certificates from authorised / Government approved / Accredited agencies traceable to National / International Standards. Re-testing / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the contract price. The contractor will also have alternate arrangements for such MMEs so that work does not suffer when the particular equipment / instrument is sent for calibration. Also if any MMEs not found fit for use, BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall ie repeat the readings taken by that instrument, failing which BHEL may deploy MME and retake the readings at Contractor's cost.
8.1.10	Re-work necessitated on account of use of invalid MMEs shall be entirely to the

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter – VIII: Inspection and Quality

	contractor's account. He shall be responsible to take all corrective actions, including resource augmentation if any, as specified by BHEL to make-up for the loss of time.
8.1.11	In the courses of erection, it may become necessary to carry repeated checks of the work with instruments recently calibrated, re-calibrated. BHEL may counter/ finally check the measurements with their own MMEs. Contractor shall render all assistance in conduct of such counter/final measurements.
8.1.12	Total Quality is the watchword of the work and Contractor shall strive to achieve the Quality Standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and Quality Standards.
8.2	<b>Stage Inspection By FES/QA Engineers</b>
8.2.1	Apart from day-to-day inspection by BHEL Engineers stationed at Site and Customer's Engineers, stage inspection of equipments under erection and commissioning at various stages shall also be conducted by teams of Engineers from Field Engineering Services of BHEL's Manufacturing Units, Quality Assurance teams from Field Quality Assurance, Unit/Factory Quality Assurance and Commissioning Engineers from Technical Services etc. Contractor shall arrange all labour, tools and tackles etc along with proper access for such stage inspections free of cost.
8.2.2	Any modifications suggested by BHEL FES and QA Engineers' team shall be carried out. Claims of contractor, if any, shall be dealt as per Section 13, and provided such modifications have not arisen for reasons attributable to the contractor.
8.3	<b>Statutory Inspection of Work</b>
8.3.1	<p>The work to be executed under these specifications has to be offered for inspection, at appropriate stages of work completion, to various statutory authorities for compliance with applicable regulations.</p> <p>The work related statutory inspections, though not limited to, are as under:</p> <ol style="list-style-type: none"><li>1) Inspectorate of Steam Boilers and Smoke Nuisance</li><li>2) Electrical Inspector</li><li>3) Factory Inspector, Labour Commissioner, PF Commissioner and other authority connected to this project work</li></ol>

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### Chapter – VIII: Inspection and Quality

	<p>The scope includes getting the approvals from the statutory authorities, which includes arranging for inspection visits of statutory authority periodically as per BHEL Engineer's instructions, arranging materials for ground inspection, taking rub outs for the pressure parts to be offered for inspection, submitting correlated inspection reports, documents, radiographs etc and following up the matter with them. Contractor shall also make all arrangements for offering the Products / Systems for inspection at location, as applicable, to the concerned authority.</p>
8.3.2	<p>Contractor should be qualified to execute pressure parts &amp; piping work coming under the purview of IBR, for which he should register himself with CIB of state concerned. contractor also should be aware of the latest IBR regulations and Electricity Act, including the amendments thereof.</p>
8.3.3	<p>Contractor shall comply with 'Qualification Tests for welders engaged in welding of Boilers and Steam Pipes under Construction, Erection and Fabrication at Site in India and in repairing Boilers and steam pipes by welding' in line with Chapter XIII of Indian Boiler Regulations-1950, for testing his welders / men / workers, including all associated fees, procedures, required instruments and equipments and their calibration there of. It shall be contractor's responsibility to obtain approval of Statutory Authorities, wherever applicable, for the conducting of any work which comes under the purview of these authorities, at his cost.</p>
8.3.4	<p>The following fees shall be excluded from scope of Contractor:</p> <ol style="list-style-type: none"><li>1. Registration Fee as per Regulation 385 of Chapter IX of Indian Boiler Regulations-1950</li><li>2. Fees for inspection of Boiler at the site of Construction as per Regulation 395 A, sl no 4 of Chapter IX of Indian Boiler Regulations-1950</li></ol> <p>However all other fees like visit fees charged by the Boiler Inspector and other arrangements for his visit or visits till satisfactory completion of work, shall be included in scope of Contractor</p>
8.4	<p>The Quality Management System of BHEL, Power Sector Regions (PSNR/PSER/PSWR/PSSR) have already been certified and accredited under ISO 9002 standards in this regard. The basic philosophy of the Quality Management System is to define the organizational responsibility, work as per</p>

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter – VIII: Inspection and Quality

	documented procedures, verify the output with respect to acceptance norms, identify the non-conforming product/ procedure and take corrective action for removal of non-conformance specifying the steps for avoiding recurrence of such non-conformities, & maintain the relevant quality records. The nonconformities are to be identified through the conduct of periodical audit of implementation of quality systems at various locations/stages of work. Suppliers/vendors of various products/services contributing in the work are also considered as part of the quality management system. as such the contractor is expected not only to conform to the quality management system of BHEL but also it is desirable that they themselves are accredited under any quality management system standard.
<b>8.5</b>	<b>Field Quality Assurance</b>
<b>8.5.1</b>	Contractor shall carry out all activities conforming to the approved Field Quality Plan (FQP) as revised from time to time. Total quality shall be the watchword of the work and contractor shall strive to achieve the quality standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and quality standards. Contractor shall provide the services of quality assurance engineer as per the relevant clauses.

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter - IX: HSE & OHSAS

9.0	<p><b>OCCUPATIONAL HEALTH, SAFETY &amp; ENVIRONMENT MANAGEMENT/ QUALITY ASSURANCE PROGRAMME:</b></p> <p>BHEL, Power Sector Regions (PSNR/ER/WR/SR) are each certified for ISO 9001. Quality of work to customer's satisfaction and fulfillment of system requirements are the essence of ISO 9001 certification. BHEL, PS Regions have HSE certification (ISO 14001 &amp; OHSAS 18001) and therefore Contractor also shall organise/ plan/ perform all their activities to meet with the applicable requirements of these standards.</p>
9.1	<p><b>HSE (Health, safety &amp; Environment):</b></p> <p>Contractor will comply with HSE (Health, safety &amp; Environment) requirements of BHEL. HSE requirements in brief, are given below :-</p>
9.1.1	<p>Contractor will nominate one of their qualified and experienced employees as Safety Officer, who will be responsible for all HSE related issues of contractors work area. Safety Officer will have authority to stop any activity, in case he observes that the activity is not being carried out in safe manner. He will conduct surprise inspection as well as periodic inspection/drill (at least once in a month) and submit such reports to BHEL. He will conduct periodic meetings with supervisors of different working groups and explain HSE issues and use of PPEs to them. Reports of such meetings will be submitted to BHEL. Contractor will develop suitable work procedures based upon HSE guidelines and OCPs and implement it. Such work procedures will consist of Area of work, T&amp;P Details, Work Procedure, PPE requirements etc. Please refer Schedule VIII of BOCW Rules for number of safety officers, qualification, duties etc.</p> <p>Contractor should highlight the requirement of safety to staff and labour through daily tool box meeting before start of the days job.</p> <p>Contractor to also submit monthly safety reports as per the format/procedure of BHEL.</p>
9.1.2	<p>The contractor shall arrange induction and regular health check of their employees as per schedule VII of BOCW rules by a registered medical practitioner. The contractor shall take special care of the employees affected with occupational diseases under rule 230 and schedule II of BOCW Rules. The employees not meeting the fitness requirement should not be engaged for such job</p>
9.1.3	Following personnel protective equipments (PPEs), in adequate numbers, will

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	<p>be made available at site &amp; their regular use by all concerned will be ensured :-</p> <ul style="list-style-type: none"><li>- HELMET</li><li>- SAFETY GOGGLES &amp; WELDING FACE SHIELDS</li><li>- SAFETY BELTS AND PROTECTIVE NET FOR WORKING AT HEIGHT</li><li>- SAFETY SHOES</li><li>- EAR PLUG</li><li>- ANY OTHER SAFETY EQUIPMENT REQUIRED FOR SAFE COMPLETION OF THE WORK</li></ul> <p>Contractor to also submit monthly reports on above as per the format/procedure of BHEL.</p>
9.1.4	Providing appropriate First Aid facilities for prompt treatment of injuries and illness at work place. Arranging training to contractor workmen/ employees for giving first aid.
9.1.5	Arranging ambulance in case of any emergency situation .
9.1.6	Identification of nearest hospital and health check-up of workmen/employees
9.1.7	Providing filtered drinking water at work place in cool container.
9.1.8	Providing Canteen, Rest Room, Washing facilities to the contracted employees as per provisions of Contract Labour Regulation Act 1970 (Chapter V).
9.1.9	Providing appropriate fire fighting equipment at designated work place and nominate a fire officer/warden adequately trained for his job.
9.1.10	Identification of nearest fire station and display contact telephone nos. / person's name around work places for cases of emergencies .
9.1.11	Providing adequate no. of 24 V sources and ensure that no hand lamps are operating at voltage level above 24 Volts.
9.1.12	Fulfilling safety requirements at all power tapping points.
9.1.13	Red & White caution tape of proper width(1.5 to 2 inch) to be used for cordoning unsafe area such as open trench, excavation area etc.
9.1.14	Providing contractors company logo on cloths /uniform/ proper identity cards with photographs, for correct identification of people working at project site .
9.1.15	High/ Low pressure welders to be identified with separate colourclothings. No welders will be deployed without passing appropriate tests and holding valid welding certificates. Approved welding procedure should be displayed at work place.
9.1.16	Displaying safe handling procedures for all chemicals such as lube oil, acid, alkali, sealing compounds etc , at work place .

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9.1.17	All scaffolding/ platforms should be made from materials of appropriate quality/grade so that these are safe for use. It should be certified/declared safe for use by an experienced contractor person, before any scaffolding/platform is used. Please refer IS:3696 part 1&2 and 4014 part 1 & 2
9.1.18	All T&Ps/ MMEs should be of reputed brand/appropriate quality & must have valid test/calibration certificates bearing endorsement from competent authority of BHEL.. Contractor to also submit monthly reports of T&Ps deployed and validity test certificates to BHEL safety Officer as per the format/procedure of BHEL.
9.1.19	Ensure that the regulatory requirement of excessive weight limit (to carry/lift/ move weights beyond prescribed limits) for male and female workers are complied with.
9.1.20	Safety slogan, Safety/ Caution boards , wherever required to be displayed in consultation with BHEL.
9.1.21	Take suitable measures for waste management and environment related laws/legislation as a part of normal construction activities. Compliance with the legal requirements on storage/ disposal of paint drums (including the empty ones), Lubricant containers, Chemical Containers, and transportation and storage of hazardous chemicals will be strictly maintained. Ensure proper cleanliness of work place, housekeeping and waste management (including proper waste disposal ) on daily basis.
9.1.22	It is imperative on the part of the contractor to join and effectively contribute in joint measures such as tree plantation, environment protection, contributing towards social upliftment, conversion of packing woods to school furniture, keeping good relation with local populace etc.
9.1.23	The contractor shall carry out periodic air and water quality check and illumination level checking in his area of work place and take suitable control measure.
9.1.24	The Contractor is required to provide proper safety net systems (IS-11057) where ever the hazard of fall from height is present as per instruction of BHEL Engineer. The safety nets shall be fire resistant, duly tested and shall be of ISI Mark and the nets shall be located as per site requirements to arrest or to reduce the consequences of a possible fall of persons working at different heights.
9.1.25	All applicable OCPs (Operational control procedures) will be followed by contractor as per BHEL instructions. This will be done as part of normal scope of work. List of such OCPs is given below . In case any other OCP is found to

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be applicable during the execution of work at site, then contractor will follow this as well, within quoted rate. These OCPs (applicable ones) will be made available to contractor during work execution at site. However for reference purpose, these are kept with Safety Officer of BHEL at the Power Sector Regional HQ, or available in downloadable format in the website, which may be referred by contractor, if they so desire.

- OCP for safe handling of chemicals
- OCP for Electrical safety
- OCP for energy conservation
- OCP for safe welding and gas cutting operation
- OCP for fire safety
- OCP for safety in use of hand tools
- OCP for first aid
- OCP for food safety at canteen
- OCP for safety in use of cranes
- OCP for storage and handing of gas cylinders
- OCP for manual arc welding
- OCP for safe use of helmets
- OCP for good house keeping
- OCP for working at height
- OCP for safe excavation
- OCP for safe filling of Hydrogen in cylinder
- OCP for illumination
- OCP for handling and erection of heavy metals
- OCP for safe acid cleaning
- OCP for safe alkali boil out
- OCP for safe oil flushing
- OCP for steam blowing
- OCP for safe working in confined area
- OCP for safe operation of passenger lift, material hoists & cages
- OCP for Vehicle maintenance
- OCP for safe radiography
- OCP for waste disposal
- OCP for working at night
- OCP for blasting
- OCP for DG Set
- OCP for handling & storage of mineral wool

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	<ul style="list-style-type: none"><li>■ OCP for drilling, reaming and grinding(machining) etc.</li><li>■ OCP for hydraulic test</li><li>■ OCP for spray insulation</li><li>■ OCP for trial run of rotary equipment</li><li>■ OCP for stress relieving</li><li>■ OCP for material preservation</li><li>■ OCP for cable laying/tray work</li><li>■ OCP for electrical maintenance</li><li>■ OCP for transformer charging</li><li>■ OCP for safe handling of battery system</li><li>■ OCP for computer operation</li><li>■ OCP for storage in open yard</li><li>■ OCP for sanitary maintenance</li><li>■ OCP for batching</li><li>■ OCP for piling rig operation</li><li>■ OCP for gas distribution test</li><li>■ OCP for cleaning of hotwell / deaerator</li><li>■ OCP for electro-resistance heating</li><li>■ OCP for compressor operation</li><li>■ OCP for O&amp;M of control of AC plant &amp; system</li><li>■ OCP for air compressor</li><li>■ OCP for passivation</li><li>■ OCP for Safe EDTA Cleaning</li><li>■ OCP for Safe Chemical cleaning of Pre boiler system</li><li>■ OCP for Safe Boiler Light up</li><li>■ OCP for Safe Rolling and Synchronisation</li><li>■ OCP for Safe Loading of Unit</li></ul>
9.2	<p><b>SAFETY AND CLEANLINESS :</b></p> <p>The contractor shall take all necessary safety precautions and arrange for appropriate appliances as per discretion of BHEL or its authorised officials (Site Construction Manager) to prevent loss of human lives, injuries, to personnel engaged and damage to property. Before commencing the work, the contractor shall submit a "Safety Plan" to the above authorised BHEL official and obtain approval on the same. The safety plan shall indicate in detail the measures that would be taken by the contractor to ensure safety of men, equipment, materials and environment during execution of the work. This will also include an organization structure, role and responsibilities of the concerned key</p>

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	personnel, the safety practices that will be followed, PPEs deployed, plan for handling critical activities and emergencies.
9.3	If the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions issued by the authorised BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the contractor.
9.4	During the course of construction, alteration or repairs, scrap with protruding nail, sharp edge etc and all other debris shall be kept clean from working areas, passage, ways and stairs in and around site.
9.5	Combustible scrap and debris shall be removed at regular intervals during the course of execution. Safe means shall be provided to facilitate such removal. The combustible scrap should be stored in safe place away from the plant materials to avoid fire accidents. The area shall be chosen in consultation with the Engineer and to be cordoned off.
9.6	Rigging equipment for materials handling shall be inspected prior to use in each shift and as necessary during its use to ensure that it is safe. Defective rigging equipment will be removed from service.
9.7	Rigging equipment shall not be loaded in excess of its recommended safe working load. Rigging equipment, when not in use, shall be removed from the original work area so as not to present a hazard to employees.
9.8	Contractor shall notify the engineer, of his intention to bring on to site any equipment or any container, with liquid or gaseous fuel or other substance which may create a hazard. The Engineer shall have the right to prescribe the condition under which such equipment or container may be handled and used during the performance of the works and the contractor shall strictly adhere to such instructions. The Engineer shall have the right to inspect any construction tool and to forbid its use, if in his opinion it is unsafe. No claim due to such prohibition will be entertained.
9.9	Where it is necessary to provide and/or store petroleum products or petroleum mixture & explosives, the contractor shall be responsible for carrying out such provision / storage in accordance with the rules & regulations laid down in the relevant petroleum act, explosive act and petroleum and carbide of calcium manual, published by the chief inspector of explosives of India. All such storage shall have prior approval if necessary from the chief inspector of explosives or any other statutory authority. The contractor shall be responsible for obtaining

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	the same.
9.10	Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dragged, struck or permitted to strike each other violently.
9.11	When cylinders are transported by powered vehicle they shall be secured in a vertical position.
9.12	All workmen of the contractor working on construction area shall wear safety shoes, hand gloves, safety helmets and safety belt as applicable. The contractor shall provide to its workforce and ensure the use of following personnel protective equipment as found necessary and as directed by BHEL.
9.12.1	Safety Helmets conforming to IS-2925 : 1984
9.12.2	Safety Belts conforming to IS-3521:1983
9.12.3	Safety Shoes conforming to IS-1989 : 1978
9.12.4	Eye and face protection devices conforming to IS – 1179:1967, IS 5983:1980, IS 8521 Part 1:1977, IS 8521 Part 2: 1994.
9.12.5	Hand and body protection devices conforming to IS 4770:1991 and IS- 6994 : Part 1: 1973, IS – 8619 : 1977
9.12.6	Ear protection IS-9167:1979
9.12.7	Respiratory Protective Devices as per IS-9473:2002, i4746:1999 and 14166:1994
9.13	The contractor shall insure his workmen against all accidents and the policy shall be presented to BHEL Engineer on demand. Other wise, BHEL will arrange the same and the expenditure towards this will be debited to the contractor. In case of a fatal or disabling injury accident to any person at construction site due to lapses by the contractor, the victim and/or his/her dependants shall be compensated by the contractor as per statutory requirements. However, if considered necessary BHEL shall have the right to impose appropriate financial penalty on contractor and recover the same from payments due to the contractor for suitably compensating the victim and/or his/her dependence before imposing any such penalty. Appropriate enquiry shall be held by BHEL giving opportunity to the contractor for presenting his case. Above safety conditions are not exhaustive but gives an idea for the contractor and contractor shall adhere to all safety precaution given by the

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	Engineer at site.
9.14	The contractor shall arrange at his cost adequate lighting facilities e.g. flood lighting, hand lamps, area lighting etc. at various levels for safe and proper working operations during night hours at the work spot as well as at the pre-assembly area.
9.15	The contractor shall be responsible for provision of all the safety notices and safety equipment as enjoined on him by the application of relevant statutory regulation / provisions and/or as called upon by BHEL from time to time. He shall be held responsible for any violation of statutory regulations (local, state or central) and BHEL instruction that may endanger safety of men, equipment and material.
9.16	The contractor shall provide temporary fencing wherever required as a safety measure against accident and damage to properties. Suitable caution notices shall be displayed where access to any part is found to be unsafe and hazardous.
9.17	Contractor shall ensure safety of all the workmen, material and equipment either belonging to him or to others working at site. He shall observe safety rules and codes applied by BHEL without exception.
9.18	It will be the responsibility of the contractor to ensure safe lifting of the equipment, taking due precaution to avoid any accident and damage to other equipment and personnel. All requisite tests and inspection of handling equipment, tools & tackle shall be periodically done by the contractor by engaging only the COMPETENT PERSONS as per law. Defective equipment or uncertified shall be removed from service. Any equipment shall not be loaded in excess of its recommended safe working load.
9.19	The contractor shall provide necessary first aid facilities as per schedule III. In addition, ambulance facilities, OHC and CMO as per schedule IV, V, X and XI of BOCW Rules as applicable for all his employees, representatives and workmen at site and BHEL shall have no obligation in this regard. The first aid boxes should be placed at various elevations so as to make them available within the reach and at the quickest possible time. The contractor should conduct periodical first -aid classes to keep his supervisor and Engineers properly trained for attending to any emergency.
9.20	Training

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9.20.1	The contractor shall arrange induction safety training for all employees before assigning work. In addition, awareness programme, mock drill at regular intervals and daily tool box meetings shall be arranged. Monthly report of the above to be given to BHEL safety Officer as per prescribed BHEL formats
9.20.2	All the contractor's supervisory personnel and sufficient number of workers shall be trained for fire protection systems. Enough number of such trained personnel must be available during the tenure of contract. Contractor should nominate his supervisor to coordinate and implement the safety measures.
9.21	Contractor shall provide enough fire protecting equipment of the types and numbers at his office, stores, temporary structure in labour colony etc. Such fire protection equipment shall be easy and kept open at all times. The fire extinguishers shall be properly refilled and kept ready which should be certified at periodic intervals. The date of changing should be marked on the Cylinders. All other fire safety measures as laid down in the "codes for fire safety at construction site" issued by safety coordinator of BHEL shall be followed. Non-compliance of the above requirement under fire protection shall in no way relieve the contractor of any of his responsibility and liabilities to fire accident occurring either to his materials or equipment or those of others. Emergency contacts nos must be displayed at prominent locations
9.22	The contractor shall at his cost, remove from vicinity of work at least once each day all combustible waste, scrap, panting materials, rubbish, unused or other materials and deposit them in places specified by BHEL to keep the work site clear and tidy. Use of undercoated canvas paper, corrugated paper, fabricated carton, plastic or other flammable materials shall be restricted to the minimum and promptly removed.
9.23	The contractor shall not use any hand lamp energized by Electric power with supply voltage of more than 24 volts in confined spaces like inside water boxes, turbine casings, condensers etc.
9.24	All portable electric tools used by the contractor shall have safe plugging system to source of power and be appropriately earthed. Only electricians licensed by appropriate statutory authority shall be employed by the contractor to carry out all types of electrical works. Details of earth resource ad their test date to be given to BHEL safety officer as per the prescribed formats of BHEL
9.25	In case of any delay in completion of a job due to mishaps attributable to lapses by the contractor, BHEL shall have the right to recover cost of such delay from

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	the payments due to the contractor, after notifying the contractor suitably.
9.26	Valve protection caps shall be kept in place and secured.
9.27	The contractor shall be responsible for the safe storage and handling of his radio-active sources as per BARC rules and regulations.
9.28	Tarpaulin being inflammable should not be used (instead, only non infusible covering materials shall be used) as protective cover while preheating, welding, stress relieving etc. at site.
9.29	If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given reasonable opportunity to do so and/or if the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instruction regarding safety issued by BHEL, BHEL shall have the right to take corrective steps at the risk and cost of the contractor after giving a notice of not less than 7 days indicating the steps that would be taken by BHEL.
9.30	If the contractor succeeds in carrying out its job in time with out any fatal or disabling injury accident and without any damage to property BHEL may, at its sole discretion, favorably consider to reward the contractor suitably for the performance.
9.31	The contractor shall carefully follow the safety requirement of BHEL/ the purchaser with the regard to voltages used in critical areas.
9.32	The contractor shall use only properly insulated and armored cables which conform to the requirement of Indian Electricity Act and Rules for all wiring, electrical applications at site. BHEL reserves the right to replace any unsafe electrical installations, wiring, cabling etc. at the cost of the contractor. All electrical appliances used in the work shall be in good working condition and shall be properly earthed. No maintenance work shall be carried out on live equipment. The contractor shall maintain adequate number of qualified electricians to maintain his temporary electrical installations. Area wise Electrical safety inspection is to be carried out on monthly basis as per "Electrical Safety Inspection checklist" and the report is to be submitted to BHEL safety officer
9.33	The contractor shall arrange adequate number of persons specifically for clearing any debris and for house keeping of the erection area including restacking of components in the erection areas. Housekeeping to be carried out

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	as per BHEL's checklist and report is to be submitted to BHEL safety officer
9.34	In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover the cost of such damages from the contractor after holding an appropriate enquiry.
9.35	The contractor shall submit report of all accidents, fires and property damage etc to the Engineer immediately after such occurrence, but in any case not later than 24 hours of the occurrence. Such reports shall be furnished in the manner prescribed by BHEL. In addition periodic reports on safety shall also be submitted by the contractor to BHEL from time to time as prescribed by the Engineer. Compiled monthly reports of all kinds of accidents, fires and property damage to be submitted to BHEL safety officer as per prescribed formats
9.36	Before commencing the work, the contractor shall appoint/nominate a responsible person to supervise implementation of all safety measures and liaison with his counterpart of BHEL.
9.37	Suitable scaffolds shall be provided for workman for all works that cannot safely be done from the ground, or from solid construction except in the case of short duration of work which can be done safely from ladders. When a ladder is used, it shall be of rigid construction made of steel. The steps shall have a minimum width of 45 cm and a maximum rise of 30 cm. Suitable handholds of good quality wood or steel shall be provided and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ horizontal and 1 vertical.
9.38	Scaffolding or staging more than 3.6 m above the ground floor, swung or suspended from an overhead support or erected with stationery support shall have a guard rail properly bolted, braced or otherwise secured, at least 90 cm above the floor or platform of such scaffolding or staging and extending along the entire length of the out side and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying, from the building or structure.
9.39	Working platforms, gangways and stairways shall be so constructed that they do not sag unduly or unequally and if the height of the platform gangways provided is more than 3.6 m above ground level or floor level, they shall be closely boarded and shall have adequate width which shall not be less than 750 mm and be suitably fenced as described above.

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9.40	Every opening in the floor or a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 90 cm.
9.41	Wherever there are open excavation in ground, they shall be fenced off by suitable railing and danger signals installed at night so as to prevent persons slipping into the excavations.
9.42	Safe means of access shall be provided to all working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 m in the length while the width between side rails in rung ladder shall in no case be less than app. 29.2 cm for ladder upto and including 3 m in length. For longer ladders this width shall be increased at least $\frac{1}{4}$ " for each additional foot of length.
9.43	A sketch of the ladders and scaffolds proposed to be used shall be prepared and approval of the Engineer obtained prior to Construction.
9.44	All personnel of the Contactor working within the plant site shall be provided with safety helmets. All welders shall wear welding goggles while doing welding work and all metal worker shall be provided with safety gloves. Persons employed on metal cutting and grinding shall wear safety glasses.
9.45	Adequate precautions shall be taken to prevent danger for electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public.
9.46	All trenches, four feet or more in depth, shall at all times be supplied with at least one ladder for each 30 m in length or fraction thereof. The ladder shall be extended from bottom of the trench to at least 90 cm above the surface of the ground. Sides of the trenches which are 1.50 m or more in depth shall be stepped back to give suitable slope or securely held by timer bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5 m of the edges of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or undercutting shall be done.
9.47.1	The contractor shall take permission of BHEL prior to risky jobs such as working at height, hot work, lifting activities, etc through permits. No job should be started without permits.
9.47.2	The Contactor shall take all measures at the sites of the work to protect all persons from accidents and shall be bound to bear the expenses of defense of

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	every suit, action or other proceeding at law that may be brought by any persons for injury sustained or death owing to neglect of the above precautions and to pay any such persons such compensation or which may with the consent of the Contractor be paid to compromise any claim by any such person should such claim proceeding be filed against BHEL, the Contractor hereby agrees to indemnify BHEL against the same.
9.48	Before any demolition work is commenced and also during the process of the work the following shall be ensured:
9.48.1	All roads and open areas adjacent to the work site shall either be closed or suitably protected.
9.48.2	No electric cable or apparatus which is liable to be a source of danger nor a cable or an apparatus used by the operator shall remain electrically charged.
9.48.3	All practical steps shall be taken to prevent danger to persons employed from the risks of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render them unsafe.
9.49	All necessary personnel safety equipment as considered adequate by the Engineer should be kept available for the use of the persons employed in the Site and maintained in a condition suitable for immediate use and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.
9.49.1	Workers employed on mixing asphalted materials, cement and lime mortars shall be provided with protective foot wear and protective goggles.
9.49.2	Those engaged in white washing and mixing or stacking of cement bags or any materials which is injurious to the eyes shall be provided with protective goggles.
9.49.3	Those engaged in welding works shall be provided with welder's protective eyesight lids.
9.49.4	Stone breakers shall be provided with protective goggles and protective clothing and seated sufficient to safe intervals.
9.49.5	Where workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that the manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into manhole, and the manholes so opened shall be cordoned off with suitable railing and provided

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	with warning signals or boards to prevent accident to the public.
9.49.6	The Contractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precautions should be taken.
9.49.6.1	No paint containing lead or lead products shall be used except in the form of paste or ready made paint.
9.49.6.2	Suitably face masks should be supplied for use by the workers where paints are applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
9.49.6.3	Overalls shall be supplied by the Contractor to the workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.
9.50	When the work is being done near any place where there is risk of drowning all necessary equipment should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.
9.51	Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safe guards. Hoisting appliance should be provided with such means as will reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers employed on electrical installations which are already energized, insulting mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductor of electricity.
9.52	All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near the places of work.
9.53	The contractor shall maintain and ensure necessary safety measures as required for inspection and tests HV test, Pneumatic test, Hydraulic test, Spring test, Bend test etc as applicable, to enable inspection Agency for performing Inspection. If any test equipment is found not complying with proper safety

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	requirements then the Inspection Agency may withhold inspection, till such time the desired safety requirements are met.
9.54	The Contractor shall notify BHEL of his intention to bring to site any equipment or material which may create hazard. BHEL shall have the right to prescribe the conditions under which such equipment or materials may be handled and the contractor shall adhere to such instructions. BHEL may prohibit the use of any construction machinery, which according to him is unsafe. No claim for compensation due to such prohibition will be entertained by BHEL.
9.55	All safety precautions shall be taken for welding and cutting operations as per IS-818. All safety precautions shall be taken for foundation and other excavation marks as per IS-3764.
9.56	All gas cylinders shall be stored in upright position. Suitable trolley shall be used. There shall be flash-back arrestors conforming to IS-11006 at both cylinder and burner ends. Damaged tube and regulators must be immediately replaced. No of cylinders shall not exceed the specified quantity as per OCP
9.57	These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent, place at work spot. The persons responsible for compliance of the safety code shall be named therein by the Contractor
9.58	To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangement made by the contract shall be open to inspection by the Engineer or the Engineer's Representative.
9.59	Keeping the work area clean/ free from debris, removed scaffoldings, scraps, insulation/sheeting wastage /cut pieces, temporary structures, packing woods etc. will be in the scope of the contractor. Such cleanings has to be done by contractor within quoted rate, on daily basis by an identified group. If such activity is not carried out by contractor / BHEL is not satisfied, then BHEL may get it done by other agency and actual cost alongwith BHEL overheads will be deducted from contractor's bill. Such decisions of BHEL shall be binding on the contractor.
9.60	Notwithstanding the above clauses there is nothing to exit the Contractor from the operations of any other Act or Rule in force in area of work in this respect. Provided always that all safety measures apart from those specifically provided in this agreement which are brought to the notice of the Contractor from time to time by the Engineer shall be complied by the Contractor. Provided further that

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	all consequences, damages, or losses arising by reason of any safety code shall be met with by the Contractor.																																																																
9.61	<p><b><u>NON COMPLIANCE:-</u></b></p> <p>NONCONFORMITY OF SAFETY RULES AND SAFETY APPLIANCES WILL BE VIEWED SERIOUSLY AND BHEL HAS RIGHT TO IMPOSE FINES ON THE CONTRACTOR AS UNDER <b><u>for every instance of violation noticed:</u></b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">SN</th> <th style="text-align: center;">Violation of Safety Norms</th> <th style="text-align: center;">Fine (in Rs)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">01</td> <td>Not Wearing Safety Helmet</td> <td style="text-align: center;">50/- *</td> </tr> <tr> <td style="text-align: center;">02.</td> <td>Not wearing Safety Belt or not anchoring life line</td> <td style="text-align: center;">100/- *</td> </tr> <tr> <td style="text-align: center;">03</td> <td>Not wearing safety shoe</td> <td style="text-align: center;">100/- *</td> </tr> <tr> <td style="text-align: center;">04</td> <td>Not keeping gas cylinders vertically</td> <td style="text-align: center;">100/-</td> </tr> <tr> <td style="text-align: center;">05</td> <td>Not using flash back arrestors</td> <td style="text-align: center;">50/-</td> </tr> <tr> <td style="text-align: center;">06</td> <td>Not wearing gloves</td> <td style="text-align: center;">50/- *</td> </tr> <tr> <td style="text-align: center;">07.</td> <td>Grinding Without Goggles</td> <td style="text-align: center;">50/- *</td> </tr> <tr> <td style="text-align: center;">08.</td> <td>Not using 24 V Supply For Internal Work</td> <td style="text-align: center;">500/-</td> </tr> <tr> <td style="text-align: center;">09.</td> <td>Electrical Plugs Not used for hand Machine</td> <td style="text-align: center;">100/-</td> </tr> <tr> <td style="text-align: center;">10.</td> <td>Not Slinging property</td> <td style="text-align: center;">200/-</td> </tr> <tr> <td style="text-align: center;">11.</td> <td>Using Damaged Sling</td> <td style="text-align: center;">200/-</td> </tr> <tr> <td style="text-align: center;">12.</td> <td>Lifting Cylinders Without Cage</td> <td style="text-align: center;">500/-</td> </tr> <tr> <td style="text-align: center;">13.</td> <td>Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.</td> <td style="text-align: center;">200/-</td> </tr> <tr> <td style="text-align: center;">14.</td> <td>Not Removing Small Scrap From Platforms</td> <td style="text-align: center;">200/-</td> </tr> <tr> <td style="text-align: center;">15.</td> <td>Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting</td> <td style="text-align: center;">200/-</td> </tr> <tr> <td style="text-align: center;">16.</td> <td>Not Maintaining Electric Winches Which are Operated Dangerously</td> <td style="text-align: center;">500/-</td> </tr> <tr> <td style="text-align: center;">17.</td> <td>Improper Earthing Of Electrical T&amp;P</td> <td style="text-align: center;">500/-</td> </tr> <tr> <td style="text-align: center;">18</td> <td>No or improper barricading</td> <td style="text-align: center;">500/-</td> </tr> <tr> <td style="text-align: center;">19.</td> <td>Activity carried out without Safety work permit (Height work, Lifting activity, Hot work-each person/case)</td> <td style="text-align: center;">1000/-</td> </tr> <tr> <td style="text-align: center;">20.</td> <td>Accident Resulting in Partial Loss in Earning Capacity</td> <td style="text-align: center;">25,000/- per victim</td> </tr> </tbody> </table>		SN	Violation of Safety Norms	Fine (in Rs)	01	Not Wearing Safety Helmet	50/- *	02.	Not wearing Safety Belt or not anchoring life line	100/- *	03	Not wearing safety shoe	100/- *	04	Not keeping gas cylinders vertically	100/-	05	Not using flash back arrestors	50/-	06	Not wearing gloves	50/- *	07.	Grinding Without Goggles	50/- *	08.	Not using 24 V Supply For Internal Work	500/-	09.	Electrical Plugs Not used for hand Machine	100/-	10.	Not Slinging property	200/-	11.	Using Damaged Sling	200/-	12.	Lifting Cylinders Without Cage	500/-	13.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-	14.	Not Removing Small Scrap From Platforms	200/-	15.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	200/-	16.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-	17.	Improper Earthing Of Electrical T&P	500/-	18	No or improper barricading	500/-	19.	Activity carried out without Safety work permit (Height work, Lifting activity, Hot work-each person/case)	1000/-	20.	Accident Resulting in Partial Loss in Earning Capacity	25,000/- per victim
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	21.	Fatal Accident/Accidents Resulting in total loss in Earning Capacity	1,00,000/- per victim #
	<p>Legend:-*: per head, #: or as deducted by Customer whichever is higher</p> <p>Any other non-conformity noticed not listed above will also be fined as deemed fit by BHEL. The decision of BHEL engineer is final on the above. The amount will be deducted from running bills of the contractor. The amount collected above will be utilized for giving award to the employees who could avoid accident by following safety rules. Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.</p>		
9.61	<p><b><u>CITATION:</u></b>-If safety record of the contractor in execution of the awarded job is to the satisfaction of safety department of BHEL, issue of an appropriate certificate to recognize the safety performance of the contractor may be considered by BHEL after completion of the job</p>		
9.62	<p><b><u>MEMORANDUM OF UNDERSTANDING</u></b> After Award Of Work, Contractors Are Required To Enter Into A Memorandum Of Understanding As Given Below:</p> <p style="text-align: center;"><b><u>Memorandum of Understanding</u></b></p> <ul style="list-style-type: none"> <li>➤ BHEL, Power Sector _____ Region is committed to Health, Safety and Environment Policy (EHS Policy).</li> <li>➤ M/s _____ do hereby also commit to the same EHS Policy while executing the Contract Number _____</li> <li>➤ M/s _____ shall ensure that safe work practices not limited to the above are followed by all construction workers and supervisors. Spirit and content therein shall be reached to all workers and supervisors for compliance.</li> <li>➤ BHEL will be carrying out EHS audits twice a year and M/s _____ shall ensure to close any non-conformity observed/reported within fifteen days.</li> </ul> <p>Signed by authorized representative of M/s -----</p>		

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	Name :  Place & Date:
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### Chapter-X: RA Bill Payments

10.0	RA Bill Payments
10.1	The contractor shall submit his monthly RA bills with all the details required by BHEL on specified date every month covering progress of work in all respects and areas for the previous calendar month.
10.2	Mode of payment and measurement of work completed shall be as per relevant clauses of General Conditions of Contract
10.3	Release of payment in each running bill including PVC Bills where ever applicable will be restricted to 95% of the value of work admitted as per stages of progressive pro rata payments.
10.4	The 5% thus remaining shall be treated as 'Retention Amount' and shall be released as per terms specified in the General Conditions of Contract.
10.5	<p>The payment for running bills will normally be released within 30 days of submission of running bill complete in all respects with all documents. It is the responsibility of the contractor to make his own arrangements for making timely payments towards labour wages, statutory payments, outstanding dues etc and other dues in the meanwhile.</p> <p>In case of Civil works, 60% of RA Bills complete and correct in all respects and certified by BHEL Engineer, shall be paid within 15 days of receipt. Balance payment shall be within 30 days.</p>
10.6	<p>BHEL shall release payment through Electronic Fund Transfer (EFT)/RTGS. In order to implement this system, Contractor to furnish details pertaining to his Bank Accounts where proceeds will be transferred through BHEL's banker, as per prescribed formats:</p> <p>Note: BHEL may also choose to release payment by other alternative modes as applicable</p>
10.7	Paying Authority shall be the Construction Manager of the Site. Any change in the paying Authority shall be intimated to the Contactor accordingly.

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter-XI : Performance Monitoring

<b>11.0</b>	<b>Performance Monitoring</b>
11.1	Performance of the contractor is monitored through various reports/reviews and shall be jointly evaluated every month for unit wise identified packages as per prescribed formats. Based on the net weighted scores obtained, Contractors shall be rated 'Good' or 'Satisfactory' or 'Unsatisfactory'
11.2	In case of any dispute on performance rating and the contractor refuses to sign on the performance rating given by BHEL package Incharge, the same shall be reviewed by BHEL site Incharge/Construction Manager and his decision shall be final.
11.3	Release of RA Bills will be contingent upon joint evaluation of performance
11.4	Performance of the contractor will be taken into consideration for assessing the capacity of the bidder to execute future jobs under tender, as detailed in the Notice Inviting Tender. Risk of non evaluation or non availability of the Monthly performance evaluation reports is to be borne by the Bidder.
11.5	In case of 'Unsatisfactory performance' for a continuous period of three or more months for a package or packages, BHEL has the right to get the balance works executed at the risk and cost of the contractor.
11.6	In case of 'Unsatisfactory performance' in a financial year, BHEL reserves the right to put on hold such Contractors for a period of six months for similar package or similar packages

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter-XII: Suspension of Business Dealings

12.0	<b>Suspension of Business dealings</b>
12.1	BHEL reserves the right to take action against contractors who fail to perform or indulge in malpractices, by suspending business dealings with them.
12.2	Suspension could be in the form of 'Hold', 'De-listing' or 'Banning' a contractor.
12.3	<p>A bidder may be put on HOLD for a period of 6 months, for future tenders for specific works on the basis of one or more of the following reasons:</p> <ul style="list-style-type: none"> <li>a) Bidder does not honour his own offer or any of its conditions within the validity period.</li> <li>b) Bidder fails to respond against three consecutive enquires of BHEL.</li> <li>c) After placement of order, Bidder fails to execute a contract.</li> <li>d) Bidder fails to settle sundry debt account, for which he is legitimately liable, within one year of its occurrence.</li> <li>e) Bidder's performance rating falls below 60% in specific category (more fully described in chapter 'Performance Monitoring')</li> <li>f) Bidder works are under strike/ lockout for a long period.</li> </ul>
12.4	<p>A Bidder may be de-listed from the list of registered Bidders of the region for a period of 1 year on the basis of one or more of the following reasons:-</p> <ul style="list-style-type: none"> <li>a) Bidder tampers with tendering procedure affecting ordering process or commits any misconduct which is contrary to business ethics.</li> <li>b) Bidder has substituted, damaged, failed to return, short returned or unauthorizedly disposed off materials/ documents/ drawings/ tools etc of BHEL.</li> <li>c) Bidder no longer has the technical staff, equipment, financial resources etc. required to execute the orders/ contracts.</li> </ul>
12.5	<p>A Bidder can be banned from doing any business with all Units of BHEL for a period of 3 years on the basis of one or more of the following reasons:</p> <ul style="list-style-type: none"> <li>a) Bidder is found to be responsible for submitting fake/ false/ forged documents, certificates, or information prejudicial to BHEL's interest.</li> <li>b) In spite of warnings, the Bidder persistently violates or circumvents the provisions of labour laws/ regulations/ rules and other statutory requirements.</li> <li>c) Bidder is found to be involved in cartel formation</li> </ul>

## SPECIAL CONDITIONS OF CONTRACT (SCC)

### Chapter-XII: Suspension of Business Dealings

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	<ul style="list-style-type: none"><li>d) The Bidder has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage etc which are contrary to business ethics.</li><li>e) The Bidder is found guilty by any court of law for criminal activity/ offences involving moral turpitude in relation to business dealings.</li><li>f) The Bidder is declared bankrupt, insolvent, has wound up or been dissolved; i.e ceases to exist for all practical purposes.</li><li>g) Bidder is found to have obtained Official Company information/ documentation by questionable means.</li><li>h) Communication is received from the administrative Ministry of BHEL to ban the Bidder from business dealings.</li></ul>
12.6	Contracts already entered with a contractor before the date of issue of order of 'HOLD' or 'DE-LISTING' shall not be affected.
12.7	All existing contracts with a 'BANNED' contractor shall normally be short closed
12.8	Once the order for suspension is passed, existing offers/new offers of the contractor shall not be entertained
12.9	The above guidelines are not exhaustive but enunciate broad principles governing action against contractors

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## **CHAPTER -1**

### **1. GENERAL INSTRUCTION TO TENDERERS**

#### **1.1. DESPATCH INSTRUCTION**

- i) The General Conditions of Contract form part of the Tender specifications. All pages of the tender documents shall be duly signed, stamped and submitted along with the offer in token of complete acceptance thereof. The information furnished shall be complete by itself. The tenderer is required to furnish all the details and other documents as required in the following pages
- ii) Tenderers are advised to study all the tender documents carefully. Any submission of tender by the tenderer shall be deemed to have been done after careful study and examination of the tender documents and with the full understanding of the implications thereof. Should the tenderers have any doubt about the meaning of any portion of the Tender Specification or find discrepancies or omissions in the drawings or the tender documents issued are incomplete or shall require clarification on any of the technical aspect, the scope of work etc., he shall at once, contact the authority inviting the tender well in time (so as not to affect last date of submission) for clarification before the submission of the tender. Tenderer's request for clarifications shall be with reference to Sections and Clause numbers given in the tender documents. The specifications and terms and conditions shall be deemed to have been accepted by the tenderer in his offer. Non compliance with any of the requirements and instructions of the tender enquiry may result in the rejection of the tender.
- iii) Integrity pact (IP) shall be applicable for all tenders / contracts if indicated in NIT. This integrity pact shall be issued as part of the Tender documents and shall be returned by the bidder along with Techno-commercial bid duly filled, signed and stamped by the authorized signatory who signs the bid. Only those vendors / bidders who have entered into such an IP with BHEL shall be considered qualified to participate in the bidding. Entering into this pact shall be a preliminary qualification.

#### **1.2. SUBMISSION OF TENDERS**

- 1.2.1 The tenderers must submit their tenders to Officer inviting tender as per instructions in the NIT
- 1.2.2 Tenders submitted by post shall be sent by 'REGISTERED POST ACKNOWLEDGEMENT DUE / by COURIER' and shall be posted with due allowance for any postal/courier delays. BHEL takes no responsibility for delay, loss or non-receipt of tenders sent by post/courier. The tenders received after the specified time of their submission are treated as 'Late Tenders' and shall not be considered under any circumstances. Offers received by Fax/Email/Internet shall be considered as per terms of NIT.

1.2.3 Tenders shall be opened by authorised Officer of BHEL at his office at the time and date as specified in the NIT, in the presence of such of those tenderers or their authorised representatives who may be present

1.2.4 Tenderers whose bids are found techno commercially qualified shall be informed the date and time of opening of the Price Bids and such Tenderers may depute their representatives to witness the opening of the price bids. BHEL's decision in this regard shall be final and binding.

1.2.5 Before submission of Offer, the tenderers are advised to inspect the site of work and the environments and be well acquainted with the actual working and other prevalent conditions, facilities available, position of material and labour, means of transport and access to Site, accommodation, etc. No claim will be entertained later on the grounds of lack of knowledge of any of these conditions.

**1.3. LANGUAGE**

1.3.1 The tenderer shall quote the rates in English language and international numerals. These rates shall be entered in figures as well as in words. For the purpose of the tenders, the metric system of units shall be used.

1.3.2 All entries in the tender shall either be typed or written legibly in ink. Erasing and over-writing is not permitted and may render such tenders liable for rejection. All cancellations and insertions shall be duly attested by the tenderer.

**1.4 PRICE DISCREPANCY:**

1.4.1 **Conventional (Manual) Price Bid opening :** In the case of price bid opening without resorting to Reverse Auction, if there are differences between the rates given by the tenderer in words and figures or in amount worked out by him, the following procedure for evaluation and award shall be followed:

- i) When there is a difference between the rates in figures and in words, the rates which corresponds to the amounts worked out by the contractor, shall be taken as correct
- ii) When the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figure or in words, then the rate quoted by the contractor in words shall be taken as correct
- iii) When the rate quoted by the contractor in figures and words tallies but the amount is not worked out correctly, the rate quoted by the contractor shall be taken as correct and not the amount.
- iv) In case of lumpsum price, if there is any difference between the amount in figures and in words, the amount quoted by the bidder in words shall be taken as correct.
- v) In case of omission in quoting any rate for one or more items, the evaluation shall be done considering the highest quoted rate obtained against the respective items by other tenderers for the subject tender. If the tenderer becomes L-1, the notional rates for the omission items shall be the lowest rates quoted for the respective items by the other tenderers against the respective omission items for the subject job and the 'Total quoted price (loaded for omissions)' shall be arrived at. However the overall price remaining the same as quoted originally, the rates for all the items in the 'Total quoted price (loaded for omissions)' shall be reduced item wise in proportion to the ratio of 'Original' total price and the 'Total quoted price (loaded for omissions)'.
- vi) The 'Final Total Amount' shall be arrived at after considering the amounts worked out in line with 'i' to 'iv' above.

1.4.2 **Reverse Auction:** In case of Reverse Auction, the successful bidder shall undertake to execute

the work as per overall price offered by him during the Reverse Auction process. In case of omission of rates, the procedure shall be as per 'Guidelines for Reverse Auction' enclosed.

**1.5. QUALIFICATION OF TENDERERS**

- i) Only tenderers who have previous experience in the work of the nature and description detailed in the Notice Inviting Tender and/or tender specification are expected to quote for this work duly detailing their experience along with offer.
- ii) Offers from tenderers who do not have proven and established experience in the field shall not be considered
- iii) Offers from tenderers who are under suspension (banned) by any Unit/Region/Division of BHEL shall not be considered.
- iv) Offers from tenderers who do not comply with the latest guidelines of Ministry/Commissions of Govt of India shall not be considered.

**1.6. EVALUATION OF BIDS**

- i) Technical Bids submitted by the tenderer will be opened first and evaluated for fulfilling the Pre Qualification criteria and other conditions in NIT/Tender documents, based on documentary evidences submitted along with the offer
- ii) In case the same qualifying experience is claimed by more than one agency, then the agency who has executed the work as per documentary evidence submitted shall only be qualified. Scope of qualifying work should be totally with the agency who has executed and in case it is only labour+consumables without T&P, then the responsibility of execution is assigned to the first agency and not to the agency who has executed only as labour supply contractor. Further, BHEL reserves the right to ask for further proofs including submission of TDS certificates for the said job
- iii) In case the qualifying experience is claimed by private organizations based on Work Order and completion certificates from another private organization, BHEL reserves the right to ask for further proofs including submission of TDS certificates for the said job
- iv) Assessing Bidder Capacity for executing the current tender shall be as per Notice Inviting Tender
- v) Price Bids of shortlisted bidders shall only be opened either through the conventional price bid opening or through electronic Reverse Auction, at the discretion of BHEL
- vi) Price Bids of unqualified bidders shall not be opened. Reasons for rejection shall be intimated in due course after issue of LOI/LOA to successful bidder and receipt of unqualified acceptance from the successful bidder
- vii) Bidders are advised to also refer to clause no 2.9.4 regarding evaluation of their performance in ongoing projects for the current tender

**1.7. DATA TO BE ENCLOSED**

Full information shall be given by the tenderer in respect of the following. Non-submission of this information may lead to rejection of the offer.

**i) INCOME TAX PERMANENT ACCOUNT NUMBER**

Certified copies of Permanent Account Numbers as allotted by Income Tax Department for the Company/Firm/Individual Partners, etc. shall be furnished along with tender.

**ii) ORGANIZATION CHART**

The organization chart of the tenderer's organization, including the names, addresses and contact

information of the Directors/Partners shall be furnished along with the offer.

- iii) An attested copy of the Power of Attorney, in case the tender is signed by an individual other than the sole proprietor
- iv) **IN CASE OF INDIVIDUAL TENDERER:**  
His / her full name, address and place & nature of business.
- v) **IN CASE OF PARTNERSHIP FIRM**  
The names of all the partners and their addresses, A copy of the partnership deed/instrument of partnership duly certified by the Notary Public shall be enclosed.
- vi) **IN CASE OF COMPANIES:**
  - a. Date and place of registration including date of commencement certificate in case of Public Companies (certified copies of Memorandum and articles of Association are also to be furnished).
  - b. Nature of business carried on by the Company and the provisions of the Memorandum relating thereto.

#### 1.8 AUTHORISATION AND ATTESTATION

Tenders shall be signed by a person duly authorized/empowered to do so. An attested copy of the Power of Attorney, in case the tender is signed by an individual other than the sole proprietor shall be submitted along with the tenders

#### 1.9 EARNEST MONEY DEPOSIT

1.9.1 Every tender must be accompanied by the prescribed amount of Earnest Money Deposit (EMD) in the manner described herein.

- i) EMD shall be furnished along with the offer in full as per the amount indicated in the Special Conditions of Contract / NIT
- ii) EMD is to be paid in cash (as permissible under Income Tax Act), Pay order or Demand Draft in favour of 'Bharat Heavy Electricals Limited' and payable at Regional HQ issuing the tender.
- iii) No other form of EMD remittance shall be acceptable to BHEL
- iv) Bidder may opt to deposit "One Time EMD" of Rs. 2.0 lakhs (Rupees Two lakhs only) with BHEL:Power Sector Region HQ issuing the tender, which will enable them to participate in all the future tender enquiries in respect of Erection and Commissioning services issued from the respective office. Interested bidders may clearly send their consent for converting the present EMD into a "One Time EMD" in their offer.
  - Note : The 'One Time EMD' cannot be withdrawn by the tenderers within 3 years from the date of deposit, under any circumstances. The Tenderer who wishes to withdraw after three years will not be allowed to submit 'One Time EMD' again.
- v) Bidders who have already deposited such "One Time EMD" of Rs. 2.00 lakh are exempted from submission of EMD for this tender. However a copy of 'One Time EMD' certificate issued by BHEL Regional HQ issuing the tender shall be enclosed along with the offer.

1.9.2 EMD by the bidder will be forfeited as per Tender Documents if

- i) After opening the tender, the bidder revokes his tender within the validity period or increases his

earlier quoted rates.

ii) The bidder does not commence the work within the period as per LOI/Contract. In case the LOI / contract is silent in this regard then within 15 days after award of contract.

1.9.3 EMD shall not carry any interest.

1.9.4 In the case of unsuccessful bidders, the Earnest Money will be refunded to them within a reasonable time after acceptance of award by successful tenderer.

#### **1.10 SECURITY DEPOSIT**

1.10.1 Upon acceptance of Tender, the successful Tenderer should deposit the required amount of Security Deposit for satisfactory completion of work, as per the rates given below:

SN	Contract Value	Security Deposit Amount
1	Up to Rs. 10 lakhs	10% of Contract Value
2	Above Rs. 10 lakhs upto Rs.50 lakhs	1 lakh + 7.5% of the Contract Value exceeding Rs. 10 lakhs.
3	Above Rs. 50 lakhs	Rs 4 lakhs + 5% of the Contract Value exceeding Rs. 50 lakhs.

1.10.2 The security Deposit should be furnished before start of the work by the contractor.

1.10.3 Security Deposit may be furnished in any one of the following forms

- i) Cash (as permissible under the Income Tax Act)
- ii) Pay Order / Demand Draft in favour of BHEL.
- iii) Local cheques of scheduled banks, subject to realization.
- iv) Securities available from Post Offices such as National Savings Certificates, Kisan Vikas Patras etc. (Certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).
- v) Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format for Security Deposit shall be in the prescribed formats
- vi) Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.
- vii) Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit should be deposited in any form as prescribed before start of the work and the balance 50% may be recovered from the running bills.
- viii) EMD of the successful bidder can be converted and adjusted against the cash portion of Security Deposit excepting for such bidders who have remitted One Time EMD.

**NOTE:** Acceptance of Security Deposit against Sl. No. (iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

1.10.4 The Security Deposit shall not carry any interest.

1.10.5 In case the value of work exceeds / reduces from the awarded / accepted value, the Security Deposit shall be correspondingly enhanced / reduced as given below:

- i) The enhanced part of the Security Deposit shall be immediately deposited by the Contractor or adjusted against payments due to the Contractor.
- ii) There will be no reduction in Security Deposit value in case of variation in contract value upto the lower limit specified in Quantity variation clause. In case of reduction of contract value beyond the lower limit specified in Quantity Variation clause, then the Security Deposit shall be re adjusted in proportion.
- iii) In case of reduction, the reduced Contract value shall be certified by BHEL Construction Manager after ascertaining / freezing of BOQ / Drawings from the Design / Engineering Centre. The reduced Security Deposit value can only be considered after taking into account the adequacy of the securities held by BHEL to meet the liabilities of the contractor for the contract, and the performance of the contract in general. In such cases, the revised value of Security Deposit shall be worked out only after execution of not less than the lower limit of the revised scope of work/contract value as per quantity variation clause, and as certified by Construction Manager. This reduction in value of Security Deposit shall not entitle the contractor to any amendment of Contract and shall be operated at the discretion of BHEL
- iv) Contract value for the purpose of operating the reduced/increased value of Security Deposit due to Quantity Variation, shall be exclusive of Price Variation Clause, Over Run Compensation and Extra works done on manday rates.

1.10.6 The validity of Bank Guarantees towards Security Deposit shall be initially upto the completion period as stipulated in the Letter of Intent/Award + 3 months, and the same shall be kept valid by proper renewal till the acceptance of Final Bills of the Contractor, by BHEL

1.10.7 BHEL reserves the right of forfeiture of Security Deposit in addition to other claims and penalties in the event of the Contractor's failure to fulfill any of the contractual obligations or in the event of termination of contract as per terms and conditions of contract. BHEL reserves the right to set off the Security Deposit against any claims of other contracts with BHEL.

#### **1.11 RETURN OF SECURITY DEPOSIT**

Security Deposit shall be refunded/Bank Guarantee(s) released to the Contractor along with the 'Final Bill' after deducting all expenses / other amounts due to BHEL under the contract / other contracts entered into with them by BHEL.

#### **1.12 BANK GUARANTEES**

Where ever Bank Guarantees are to be furnished/submitted by the contractor, the following shall be complied with

- i) Bank Guarantees shall be from Scheduled Banks / Public Financial Institutions as defined in the Companies Act.
- ii) The Bank Guarantees shall be as per prescribed formats.
- iii) It is the responsibility of the bidder to get the Bank Guarantees revaluated/extended for the required period (subject to a minimum period of six months), as per the advice of BHEL Site Engineer / Construction Manager. BHEL shall not be liable for issue of any reminders regarding expiry of the

**Bank Guarantees.**

- iv) In case extension/further extensions of any Bank Guarantees are not required, the bidders shall ensure that the same is explicitly endorsed by the Construction Manager and submitted to the Regional HQ issuing the LOI/LOA.
- v) In case the Bank Guarantees are not extended before the expiry date, BHEL reserves the right to invoke the same by informing the concerned Bank in writing, without any advance notice/communication to the concerned bidder.
- vi) Bidders to note that any corrections to Bank Guarantees shall be done by the issuing Bank, only through an amendment in an appropriate non judicial stamp paper.
- vii) The Original Bank Guarantee shall be sent directly by the Bank to BHEL under Registered Post (Acknowledgement Due), addressed to the Subcontracting Department of the respective Region.

**1.13 VALIDITY OF OFFER**

The rates in the Tender shall be kept open for acceptance for a minimum period of **SIX MONTHS** from latest due date of offer submission (including extension, if any) . In case BHEL (Bharat Heavy Electricals Ltd) calls for negotiations, such negotiations shall not amount to cancellation or withdrawal of the original offer which shall be binding on the tenderers.

**1.14 EXECUTION OF CONTRACT AGREEMENT**

The successful tenderer's responsibility under this contract commences from the date of issue of the Letter of Intent by Bharat Heavy Electricals Limited. The Tenderer shall submit an unqualified acceptance to the Letter of Intent/Award within the period stipulated therein.

The successful tenderer shall be required to execute an agreement in the prescribed form, with BHEL, within a reasonable time after the acceptance of the Letter of Intent/Award, and in any case before releasing the first running bill. The contract agreement shall be signed by a person duly authorized/empowered by the tenderer. The expenses for preparation of agreement document shall be borne by BHEL

**1.15 REJECTION OF TENDER AND OTHER CONDITIONS**

- 1.15.1 The acceptance of tender will rest with BHEL which does not bind itself to accept the lowest tender or any tender and reserves to itself full rights for the following without assigning any reasons whatsoever:-

- a. To reject any or all of the tenders.
- b. To split up the work amongst two or more tenderers as per NIT
- c. To award the work in part if specified in NIT
- d. In case of either of the contingencies stated in (b) and (c) above, the time for completion as stipulated in the tender shall be applicable.

- 1.15.2 Conditional tenders, unsolicited tenders, tenders which are incomplete or not in the form specified or defective or have been materially altered or not in accordance with the tender

conditions, specifications etc., are liable to be rejected.

- 1.15.3 Tenders are liable to be rejected in case of unsatisfactory performance of the tenderer with BHEL, or tenderer under suspension (hold/banning /delisted ) by any unit / region / division of BHEL or tenderers who do not comply with the latest guidelines of Ministry/Commissions of Govt of India. BHEL reserves the right to reject a bidder in case it is observed that they are overloaded and may not be in a position to execute this job as per the required schedule in line with clause no. 9.0 of the 'NIT'. The decision of BHEL will be final in this regard.
- 1.15.4 If a tenderer who is a proprietor expires after the submission of his tender or after the acceptance of his tender, BHEL may at their discretion, cancel such tender. If a partner of a firm expires after the submission of tender or after the acceptance of the tender, BHEL may then cancel such tender at their discretion, unless the firm retains its character.
- 1.15.5 BHEL will not be bound by any Power of Attorney granted by changes in the composition of the firm made subsequent to the execution of the contract. They may, however, recognise such power of Attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.
- 1.15.6 If the tenderer deliberately gives wrong information in his tender, BHEL reserves the right to reject such tender at any stage or to cancel the contract if awarded and forfeit the Earnest Money/Security Deposit/any other money due.
- 1.15.7 Canvassing in any form in connection with the tenders submitted by the Tenderer shall make his offer liable to rejection.
- 1.15.8 In case the Proprietor, Partner or Director of the Company/Firm submitting the Tender, has any relative or relation employed in BHEL, the authority inviting the Tender shall be informed of the fact as per specified format, along with the Offer. Failing to do so, BHEL may, at its sole discretion, reject the tender or cancel the contract and forfeit the Earnest Money/Security Deposit.
- 1.15.9 The successful tenderer should not sub-contract part or complete work detailed in the tender specification undertaken by him without written permission of BHEL's Construction Manager/Site Incharge. The tenderer is solely responsible to BHEL for the work awarded to him.
- 1.15.10 The Tender submitted by a techno commercially qualified tenderer shall become the property of BHEL who shall be under no obligation to return the same to the bidder. However unopened price bids and late tenders shall be returned to the bidders
- 1.15.11 Unsolicited discount received after the due date and time of Bid Submission shall not be considered for evaluation. However, if the party who has submitted the unsolicited discount/rebate becomes the L-I party, then the awarded price i.e contract value shall be worked out after considering the discount so offered.
- 1.15.12 BHEL shall not be liable for any expenses incurred by the bidder in the preparation of the tender irrespective of whether the tender is accepted or not.

## **CHAPTER-2**

2.1 **DEFINITION:** The following terms shall have the meaning hereby assigned to them except where the context otherwise requires

- i) BHEL shall mean Bharat Heavy Electricals Limited (of the respective Power Sector Region inviting the Tender), a company registered under Indian Companies Act 1956, with its Registered Office at BHEL HOUSE, SIRI FORT, NEW DELHI – 110 049, or its Power Sector Regional Offices or its Authorised Officers or its Site Engineers or other employees authorised to deal with any matters with which these persons are concerned on its behalf.
- ii) "EXECUTIVE DIRECTOR" or 'GROUP GENERAL MANAGER' or "GENERAL MANAGER (Incharge)" or "GENERAL MANAGER" shall mean the Officer in Administrative charge of the respective Power Sector Region.
- iii) "COMPETENT AUTHORITY" shall mean Executive Director or Group General Manager or General Manager (Incharge) or General Manager or BHEL Officers who are empowered to act on behalf of the Executive Director or General Manager (Incharge) or General Manager of BHEL.
- iv) "ENGINEER" or "ENGINEER IN CHARGE" shall mean an Officer of BHEL as may be duly appointed and authorized by BHEL to act as "Engineer" on his behalf for the purpose of the Contract, to perform the duty set forth in this General Conditions of Contract and other Contract documents. The term also includes 'CONSTRUCTION MANAGER' or 'SITE INCHARGE' as well as Officers at Site or at the Headquarters of the respective Power Sector Regions.
- v) "SITE" shall mean the places or place at which the plants/equipments are to be erected and services are to be performed as per the specification of this Tender.
- vi) "CLIENT OF BHEL" or "CUSTOMER" shall mean the project authorities with whom BHEL has entered into a contract for supply of equipments or provision of services.
- vii) "CONTRACTOR" shall mean the successful Bidder/Tenderer who is awarded the Contract and shall include the Contractor's successors, heirs, executors, administrators and permitted assigns.
- viii) "CONTRACT" or "CONTRACT DOCUMENT" shall mean and include the Agreement of Work Order, the accepted appendices of Rates, Schedules, Quantities if any, General Conditions of Contract, Special Conditions of Contract, Instructions to the Tenderers, Drawings, Technical Specifications, the Special Specifications if any, the Tender documents, subsequent amendments mutually agreed upon and the Letter of Intent/Acceptance issued by BHEL. Any conditions or terms stipulated by the contractor in the tender documents or subsequent letters shall not form part of the contract unless, specifically accepted in writing by BHEL in the Letter of Intent/Award and incorporated in the agreement.
- ix) "GENERAL CONDITIONS OF CONTRACT" shall mean the 'Instructions to Tenderers' and 'General Conditions of Contract' pertaining to the work for which above tenders have been called for.

x)	"TENDER SPECIFICATION" or "TENDER" or "TENDER DOCUMENTS" shall mean General Conditions, Common Conditions, Special Conditions, Price Bid, Rate Schedule, Technical Specifications, Appendices, Annexures, Corrigendums, Amendments, Forms, procedures, Site information, etc and drawings/documents pertaining to the work for which the tenderers are required to submit their offers. Individual specification number will be assigned to each Tender Specification.
xi)	"LETTER OF INTENT" shall mean the intimation by a Letter/Fax/email to the tenderer that the tender has been accepted in accordance with provisions contained in the letter. The responsibility of the contractor commences from the date of issue of this letter and all terms and conditions of the contract are applicable from this date.
xii)	"COMPLETION TIME" shall mean the period by 'date/month' specified in the 'Letter of Intent/Award' or date mutually agreed upon for handing over of the intended scope of work, the erected equipment/plant which are found acceptable by the Engineer, being of required standard and conforming to the specifications of the Contract.
xiii)	"PLANT" shall mean and connote the entire assembly of the plant and equipments covered by the contract.
xiv)	"EQUIPMENT" shall mean equipment, machineries, materials, structural, electricals and other components of the plant covered by the contract.
xv)	"TESTS" shall mean and include such test or tests to be carried out on the part of the contractor as are prescribed in the contract or considered necessary by BHEL, in order to ascertain the quality, workmanship, performance and efficiency of the contractor or part thereof.
xvi)	"APPROVED", "DIRECTED" or "INSTRUCTED" shall mean approved, directed or instructed by BHEL.
xvii)	"WORK or CONTRACT WORK" shall mean and include supply of all categories of labour, specified consumables, tools and tackles and Plants required for complete and satisfactory site transportation, handling, stacking, storing, erecting, testing and commissioning of the equipments to the entire satisfaction of BHEL.
xviii)	"SINGULAR AND PLURALS ETC" words carrying singular number shall also include plural and vice versa, where the context so requires. Words imparting the masculine Gender shall be taken to include the feminine Gender and words imparting persons shall include any Company or Associations or Body of Individuals, whether incorporated or not.
xix)	"HEADING" – The heading in these General Conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken as instructions thereof or of the contract.
xx)	"MONTH" shall mean calendar month unless otherwise specified in the Tender.

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xxi)	Day' or 'Days' unless herein otherwise expressly defined shall mean calendar day or days of twenty four (24) hours each. A week shall mean continuous period of seven (7) days.
xxii)	"COMMISSIONING" shall mean the synchronisation testing and achieving functional operation of the Equipment with associated system after all initial adjustments, trials, cleaning, re-assembly required at site if any, have been completed and Equipment with associated system is ready for taking into service.
xxiii)	"WRITING" shall include any manuscript type written or hand written or printed statement or electronically transmitted messages, under the signature or seal or transmittal of BHEL.
xxiv)	"TEMPORARY WORK" shall mean all temporary works for every kind required in or for the execution, completion, maintenance of the work.
xxv)	'CONTRACT PRICE' or 'CONTRACT VALUE' shall mean the sum mentioned in the LOI/LOA/Contract Agreement subject to such additions thereto or deductions there from as may be made under provisions hereinafter contained
xxvi)	"COMMENCEMENT DATE" or "START DATE" shall mean the commencement/start of work at Site as per terms defined in the Tenderl
xxvii)	"SHORT CLOSING" or "FORE CLOSING" of Contract shall mean the premature closing of Contract, for reasons not attributable to the contractor and mutually agreed between BHEL and the contractor
xxviii)	"TERMINATION" of Contract shall mean the pre mature closing of contract due to reasons as mentioned in the contract
xxix)	"DE MOBILISATION" shall mean the temporary winding up of Site establishment by Contractor leading to suspension of works temporarily for reasons not attributable to the contractor
xxx)	"RE MOBILISATION" shall mean the resumption of work with all resources required for the work after demobilization.

## 2.2 LAW GOVERNING THE CONTRACT AND COURT JURISDICTION

The contract shall be governed by the Law for the time being in force in the Republic of India. The Civil Court having original Civil Jurisdiction at Delhi for PSNR, at Kolkata for PSER, at Nagpur for PSWR and at Chennai for PSSR, shall alone have exclusive jurisdiction in regard to all claims in respect of the Contract. No other Civil Court shall have jurisdiction in case of any dispute, under this contract

## 2.3 ISSUE OF NOTICE

### 2.3.1 Service of notice on contractor

Any notice to be given to the Contractor under the terms of the contract shall be served by sending the same by **Registered Post / Speed Post** to or leaving the same at the Contractor's last known address of the principal place of business (or in the event of the contractor being a company, to or at its Registered Office). In case of change of address, the notice shall be served at changed address as notified in writing by the Contractor to BHEL. Such posting or leaving of the notice shall be deemed to be good service of such notice and the time mentioned to the condition for doing any act after notice shall be reckoned from the date so mentioned in such notice.

### 2.3.2 Service of notice on BHEL

Any notice to be given to BHEL in-charge/Region under the terms of the Contract shall be served by sending the same by post to or leaving the same at BHEL address or changed address as notified in writing by BHEL to the Contractor.

**2.4 USE OF LAND**

No land belonging to BHEL or their Customer under temporary possession of BHEL shall be occupied by the contractor without written permission of BHEL.

**2.5 COMMENCEMENT OF WORK**

2.5.1 The contractor shall commence the work as per the time indicated in the Letter of Intent from BHEL and shall proceed with the same with due expedition without delay.

2.5.2 If the contractor fails to start the work within stipulated time as per LOI or as intimated by BHEL, then BHEL at its sole discretion will have the right to cancel the contract. The Earnest Money and/or Security Deposit with BHEL will stand forfeited without any further reference to him without prejudice to any and all of BHEL's other rights and remedies in this regard.

2.5.3 All the work shall be carried out under the direction and to the satisfaction of BHEL.

**2.6 MEASUREMENT OF WORK AND MODE OF PAYMENT:**

2.6.1 All payments due to the contractors shall be made by e mode only, unless otherwise found operationally difficult for reasons to be recorded in writing

2.6.2 For progress running bill payments: - The Contractor shall present detailed measurement sheets in triplicate, duly indicating all relevant details based on technical documents and connected drawings for work done during the month/period under various categories in line with terms of payment as per contract. The basis of arriving at the quantities, weights shall be relevant documents and drawings released by BHEL. These measurement sheets shall be prepared jointly with BHEL Engineers and signed by both the parties.

2.6.3 These measurement sheets will be checked by BHEL Engineer and quantities and percentage eligible for payment under various groups shall be decided by BHEL Engineer. The abstract of quantities and percentage so arrived at based on the terms of payment shall be entered in Measurement Book and signed by both the parties.

2.6.4 Based on the above quantities, contractor shall prepare the bills in prescribed format and work out the financial value. These will be entered in Measurement Book and signed by both the parties. Payment shall be made by BHEL after effecting the recoveries due from the contractor.

2.6.5 All recoveries due from the contractor for the month/period shall be effected in full from the corresponding running bills unless specific approval from the competent authorities is obtained to the contrary.

2.6.6 Measurement shall be restricted to that portion of work for which it is required to ascertain the financial liability of BHEL under this contract.

2.6.7 The measurement shall be taken jointly by persons duly authorized on the part of BHEL and by the Contractor.

2.6.8 The Contractor shall bear the expenditure involved if any, in making the measurements and testing of materials to be used/used in the work. The contractor shall, without extra charges, provide all the assistance with appliances and other things necessary for measurement.

2.6.9 If at any time due to any reason whatsoever, it becomes necessary to re-measure the work done in full or in part, the expenses towards such re measurements shall be borne by the contractor unless such re measurements are warranted solely for reasons not attributable to contractor.

2.6.10 Passing of bills covered by such measurements does not amount to acceptance of the completion of the work measured. Any left out work has to be completed, if pointed out at a later date by BHEL.

2.6.11 Final measurement bill shall be prepared in the final bill format prescribed for the purpose based on the certificate issued by BHEL Engineer that entire works as stipulated in tender specification has been completed in all respects to the entire satisfaction of BHEL. Contractor shall give unqualified "No Claim" Certificate. All the tools and tackles loaned to him should be returned in satisfactory condition to BHEL. The abstract of final quantities and financial values shall also be entered in the Measurement Books and signed by both parties to the contract. The Final Bill shall be prepared and paid within a reasonable time after completion of work.

**2.7 RIGHTS OF BHEL**

BHEL reserves the following rights in respect of this contract during the original contract period or its extensions if any, as per the provisions of the contract, without entitling the contractor for any compensation.

2.7.1 To withdraw any portion of work and/or to restrict/alter quantum of work as indicated in the contract during the progress of work and get it done through other agencies to suit BHEL's commitment to its customer or in case BHEL decides to advance the date of completion due to other emergent reasons/ BHEL's obligation to its customer.

2.7.2 To terminate the contract or get any part of the work done through other agency or deploy BHEL's own/hired/otherwise arranged resources , at the risk and cost of the contractor after due notice of a period of two weeks by BHEL, in the event of:-

- i) Contractor's continued poor progress
- ii) Withdrawal from or abandonment of the work before completion of the work
- iii) Contractor's inability to progress the work for completion as stipulated in the contract
- iv) Poor quality of work
- v) Corrupt act of Contractor
- vi) Insolvency of the Contractor
- vii) Persistent disregard to the instructions of BHEL
- viii) Assignment, transfer, sub-letting of contract without BHEL's written permission
- ix) Non fulfillment of any contractual obligations
- x) In the opinion of BHEL, the contractor is overloaded and is not in a position to execute the job as per required schedule

2.7.3 To meet the expenses including BHEL overheads on the differential cost at 5%, over and above the Liquidated damages/penalties arising out of "Risk & Cost" as explained above under Sl.No. 2.7.2. BHEL shall recover the amount from any money due from Contractor, or from any money due to the Contractor including Security Deposit, or by forfeiting any T&P or material of the contractor under this contract or any other contract of BHEL or by any other means or any combination thereof

2.7.4 To terminate the contract or to restrict the quantum of work and pay for the portion of work executed in case BHEL's contract with their customer are terminated for any reason, as per mutual agreement.

2.7.5 To effect recovery from any amounts due to the contractor under this or any other contract or in any other form, the moneys BHEL is statutorily forced to pay to anybody, due to contractor's failure to fulfill any of his obligations. BHEL shall levy overheads of 5% on all such payments along with interest as defined elsewhere in the GCC.

2.7.6 While every endeavour will be made by BHEL to this end, they cannot guarantee uninterrupted work due to conditions beyond their control. The Contractor will not be normally entitled for any compensation/extra payment on this account unless otherwise specified elsewhere in the contract.

2.7.7 In case the execution of works comes to a complete halt or reaches a stage wherein worthwhile works cannot be executed and there is no possibility of commencement of work for a period of not less than two months, due to reasons not attributable to the contractor and other than Force Majeure conditions, BHEL may consider permitting the contractor to de mobilize forthwith and re mobilize at an agreed future date. Cost of such demobilization/remobilization shall be mutually agreed. ORC in such cases shall not be applicable for the period between the period of demobilization and re mobilisation. The duration of contract/time extension shall accordingly get modified suitably. In case of any conflict, BHEL decision in this regard shall be final and binding on the contractor.

2.7.8 In the unforeseen event of inordinate delay in receipt of materials, drawings, fronts, etc, due to which inordinate discontinuity of work is anticipated, BHEL at its discretion may consider contractor's request to short close the contract in following cases:

- a) The balance works (including but not limited to Trial Operation, PG Test, etc) are minor vis a vis the scope of work envisaged as per the contract.
- b) There has been no significant work in past 6 months OR no significant work is expected in next 6 months (example in Hydro projects or in projects where work has stopped due to reasons beyond the control of BHEL)
- c) The balance works cannot be done within a reasonable period of time as they are dependent on unit shutdown or on other facilities of customer or any other reasons not attributable to the contractor

At the point of requesting for short closure, contractor shall establish that he has completed all works possible of completion and he is not able to proceed with the balance works due to constraints beyond his control. In such a case, the estimated value of the unexecuted portion of work ( or estimated value of services to be provided for carrying out milestone/stage payments like

Trial Operation/PG Test, etc) as mutually agreed, shall however be reduced from the final contract value.

**2.7.9 LIQUIDATED DAMAGES/PENALTY**

If the contractor fails to maintain the required progress of work which results in delay in the completion of the work as per the contractual completion period, BHEL shall have the right to impose Liquidated Damage/Penalty at the rate of 0.5% of the contract value, per week of delay or part thereof subject to a maximum of 10% of the contract value. For this purpose, the period of delay shall be the delay attributable to the Contractor for the completion of work as per contract. Contract Value for this purpose, shall be the final executed value exclusive of ORC, Extra Works executed on Manday rate basis, Supplementary/Additional Items and PVC.

**2.8 RESPONSIBILITIES OF THE CONTRACTOR IN RESPECT OF LOCAL LAWS, EMPLOYMENT OF WORKERS ETC.**

The following are the responsibilities of the contractor in respect of observance of local laws, employment of personnel, payment of taxes etc. The subcontractor shall fully indemnify BHEL against any claims of whatsoever nature arising due to the failure of the contractor in discharging any of his responsibilities hereunder:

- 2.8.1 As far as possible, Unskilled Workers shall be engaged from the local areas in which the work is being executed.
- 2.8.2 The contractor at all times during the continuance of this contract shall, in all his dealings with local labour for the time being employed on or in connection with the work, have due regard to all local festivals and religious and other customs.
- 2.8.3 The contractor shall comply with all applicable State and Central Laws, Statutory Rules, Regulations etc. such as Payment of Wages Act, Minimum Wages Act, Workmen Compensation Act, Employer's Liability Act, Industrial Disputes Act, Employers Provident Act, Employees State Insurance Scheme, Contract Labour (Regulation and Abolition) Act 1970, Payment of Bonus & Gratuity Act and other Acts, Rules and Regulations for labour as may be enacted by the Government during the tenure of the Contract and having force or jurisdiction at Site. The Contractor shall also give to the local Governing Body, Police and other relevant Authorities all such notices as may be required by the Law.
- 2.8.4 The contractor shall obtain independent License under the Contract Labour (Regulations and Abolition Act, 1970) as required from the concerned Authorities based on the certificate (Form-V) issued by the Principal Employer/Customer
- 2.8.5 The contractor shall pay all taxes, fees, license charges, deposits, duties, tolls, royalties, commission or other charges which may be leviable on account of his operations in executing the contract.
- 2.8.6 While BHEL would pay the inspection fees and Registration fees of Boiler/Electrical Inspectorate,

all other arrangements for site visits periodically by the Inspectorate to site, Inspection certificate etc. will have to be made by contractor. However, BHEL will not make any payment to the Inspectorate in connection with contractor's Welders/Electricians qualification tests etc.

- 2.8.7 Contractor shall be responsible for provision of Health and Sanitary arrangements (more particularly described in Contract Labour Regulation & Abolition Act), Safety precautions etc. as may be required for safe and satisfactory execution of contract.
- 2.8.8 The contractor shall be responsible for proper accommodation including adequate medical facilities for personnel employed by him.
- 2.8.9 The contractor shall be responsible for the proper behavior and observance of all regulations by the staff employed by him.
- 2.8.10 The contractor shall ensure that no damage is caused to any person/property of other parties working at site. If any such damage is caused, it is responsibility of the contractor to make good the losses or compensate for the same.
- 2.8.11 All the properties/equipments/components of BHEL/their Client loaned with or without deposit to the contractor in connection with the contract shall remain properties of BHEL/their Client.
- 2.8.12 The contractor shall use such properties for the purpose of execution of this contract. All such properties/equipments/components shall be deemed to be in good condition when received by the contractor unless he notifies within 48 hours to the contrary. The contractor shall return them in good condition as and when required by BHEL/their Client. In case of non-return, loss, damage, repairs etc, the cost thereof as may be fixed by BHEL Engineer will be recovered from the contractor
- 2.8.13 In case the contractor is required to undertake any work outside the scope of this contract, the rates payable shall be those mutually agreed upon if the item rates are not mentioned in existing contract
- 2.8.14 Any delay in completion of works/or non achievement of periodical targets due to the reasons attributable to the contractor, the same may have to be compensated by the contractor either by increasing manpower and resources or by working extra hours and/or by working more than one shift. All these are to be carried out by the contractor at no extra cost.
- 2.8.15 The contractor shall arrange, coordinate his work in such a manner as to cause no hindrance to other agencies working in the same premises.
- 2.8.16 All safety rules and codes applied by the Client/BHEL at site shall be observed by the contractor without exception. The contractor shall be responsible for the safety of the equipment/material and works to be performed by him and shall maintain all light, fencing guards, slings etc. or other protection necessary for the purpose. Contractor shall also take such additional precautions as may be indicated from time to time by the Engineer with a view to prevent pilferage, accidents, fire hazards. Due precautions shall be taken against fire hazards and atmospheric conditions. Suitable number of Clerical staff, watch and ward, store keepers to take care of equipment/materials and construction tools and tackles shall be posted at site by the contractor till the completion of work

under this contract.

The contractor shall arrange for such safety devices as are necessary for such type of work and carry out the requisite site tests of handling equipment, lifting tools, tackles etc. as per prescribed standards and practices.

Contractor has to ensure the implementation of Health, Safety and Environment (HSE) requirements as per directions given by BHEL/Customer. The contractor has to assist in HSE audit by BHEL/Customer and submit compliance Report. The contractor has to generate and submit record/reports as per HSE plan/activities as per instruction of BHEL/Customer

- 2.8.17 The contractor will be directly responsible for payment of wages to his workmen. A pay roll sheet giving all the payments given to the workers and duly signed by the contractor's representative should be furnished to BHEL site for record purpose, if so called for.
- 2.8.18 In case of any class of work for which there is no such specification as laid down in the contract, such work shall be carried out in accordance with the instructions and requirements of the Engineer.
- 2.8.19 Also, no idle charges will be admissible in the event of any stoppage caused in the work resulting in contractor's labour and Tools & Plants being rendered idle due to any reason at any time.
- 2.8.20 The contractor shall take all reasonable care to protect the materials and work till such time the plant/equipment has been taken over by BHEL or their Client whichever is earlier.
- 2.8.21 The contractor shall not stop the work or abandon the site for whatsoever reason of dispute, excepting force majeure conditions. All such problems/disputes shall be separately discussed and settled without affecting the progress of work. Such stoppage or abandonment shall be treated as breach of contract and dealt with accordingly
- 2.8.22 The contractor shall keep the area of work clean and shall remove the debris etc. while executing day-to-day work. Upon completion of work, the contractor shall remove from the vicinity of work, all scrap, packing materials, rubbish, unused and other materials and deposit them in places specified by the Engineer. The contractor will also demolish all the hutments, sheds, offices, etc. constructed and used by him and shall clean the debris. In the event of his failure to do so, the same will be arranged to be done by the Engineer and the expenses recovered from the contractor.
- 2.8.23 The contractor shall execute the work in the most substantial and workman like manner in the stipulated time. Accuracy of work and timely execution shall be the essence of this contract. The contractor shall be responsible to ensure that the quality, assembly and workmanship conform to the dimensions and clearance given in the drawings and/ or as per the instructions of the Engineer.
- 2.8.24 The Contractor to note that some of BHEL's T&Ps/MMDs may not be insured. The Contractor will take necessary precautions and due care to protect the same while in his custody from any damage/ loss till the same is handed over back to BHEL. In case the damage / loss is due to carelessness/ negligence on the part of the contractor, the Contractor is liable to get them repair/

replaced immediately and in case of his failure to do so within a reasonable time, BHEL will reserve the right to recover the loss from the contractor.

**2.9 PROGRESS MONITORING, MONTHLY REVIEW AND PERFORMANCE EVALUATION**

2.9.1 A detailed plan/programme for completion of the contractual scope of work as per the time schedule given in the contract shall be jointly agreed between BHEL and Contractor, before commencement of work. The above programme shall be supported by monthwise deployment of resources viz Manpower, T&P, Consumables, etc. Progress will be reviewed periodically (Daily/Weekly/Monthly) vis a vis this jointly agreed programme. The Contractor shall submit periodical progress reports (Daily/Weekly/Monthly) and other reports/information including manpower, consumables, T&P mobilization etc as desired by BHEL.

2.9.2 Monthly progress review between BHEL and Contractor shall be based on the agreed programme as above, availability of inputs/fronts etc, and constraints if any, as per prescribed formats. Manpower, T&P and consumable reports as per prescribed formats shall be submitted by contractor every month. Release of RA Bills shall be contingent upon certification by BHEL Site Engineer of the availability of the above prescribed formats duly filled in and signed.

2.9.3 The burden of proof that the causes leading to any shortfall is not due to any reasons attributable to the contractor is on the contractor himself. The monthly progress review shall record shortfalls attributable to (i) Contractor, (ii) Force Majeure Conditions, and (iii) BHEL

2.9.4 Performance of the Contractor shall be assessed as per prescribed formats and shall form the basis for 'Annual/Overall Performance Evaluation' of the Contractor and also for 'Assessment of Capacity of Bidder' for Tenders where the Contractor is a bidder. BHEL reserves the right to revise the evaluation formats during the course of execution of the works

**2.10 TIME OF COMPLETION**

2.10.1 The time schedule shall be as prescribed in the Contract. The time for completion shall be reckoned from the date of commencement of work at Site as certified by BHEL Engineers

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

**2.11 EXTENSION OF TIME FOR COMPLETION**

2.11.1 If the completion of work as detailed in the scope of work gets delayed beyond the contract period, the contractor shall request for an extension of the contract and BHEL at its discretion may extend the Contract.

2.11.2 Based on the monthly reviews jointly signed, the works balance at the end of original contract period less the backlog attributable to the contractor shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', the contractor is bound to complete the portion of backlog attributable to the contractor. Any further 'Time extension' or 'Time extensions' at the end of the previous extension shall be worked out similarly.

2.11.3 However if any 'Time extension' is granted to the contractor to facilitate continuation of work and completion of contract, due to backlog attributable to the contractor alone, then it shall be without prejudice to the rights of BHEL to impose penalty/LD for the delays attributable to the contractor, in addition to any other actions BHEL may wish to take at the risk and cost of contractor.

2.11.4 A joint programme shall be drawn for the balance amount of work to be completed during the period of 'Time Extension', along with matching resources (with weightages) to be deployed by the contractor as per specified format. Review of the programme and record of shortfall shall be done

every month of the 'Time extension' period in the same manner as is done for the regular contract period.

2.11.5 During the period of 'Time extension', contractor shall maintain their resources as per mutually agreed program

2.11.6 At the end of total work completion as certified by BHEL Engineer, and upon analysis of the total delay, the portion of time extensions attributable to (i) Contractor, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to be exhausted in the same order. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed/levied for the portion of time extensions attributable to contractor and recoverable from the dues payable to the contractor.

**2.12 OVERRUN COMPENSATION**

2.12.1 Over Run Compensation (ORC) is payable for works done during the extension period, by way of rate revisions for periods beyond original contract period subject to the following terms and conditions.

2.12.2 Rates shall be increased by 10% for the first twelve months of one or more extensions beyond original contract period. For the next twelve months of further extensions if any, rates shall be increased as above by 10% over the previous twelve months, and similarly for each subsequent twelve months extension.

2.12.3 The amount of increase payable per month due to rate revisions is subject to a minimum of Rs 1,00,000/- per month and a maximum of Rs 10,00,000/- per month.

2.12.4 Should there be any 'Time extension' for reasons attributable only to the contractor, then the work shall be executed by the contractor at the rates applicable for the period the work was planned

2.12.5 Payment of ORC shall be regulated as follows:

- i) Contractor is entitled to Over Run Compensation (ORC) only for the portion of backlog attributable to BHEL.
- ii) 50% of the compensation as per clause 2.12.3 is allocated for deployment of resources agreed as per the joint programme drawn vide 2.11.4. Payment shall however be based on the actual deployment of resources for the month as certified by BHEL, as per weightages assigned therein
- iii) 50% of the compensation as per clause 2.12.3, is allocated for achieving of planned progress agreed as per the joint programme drawn vide 2.11.4. Payment shall be on pro rata basis for actual achieved quantities
- iv) Total Over Run Compensation shall be limited to 10% of the executed contract value as certified in Final Bill. For this purpose executed contract value excludes PVC, ORC, Supplementary/Additional Items and Extra Works done on Manday rate basis

2.12.6 Contractor shall not be entitled for any Over Run Compensation (ORC) for the portion of backlog attributable to the contractor. Such works shall be executed at the rates applicable for the period the work was planned

**2.13 INTEREST BEARING RECOVERABLE ADVANCES**

2.13.1 Normally no advance is payable to the contractor. However, advance payment in exceptional circumstances shall be interest bearing and secured through a Bank Guarantee and shall be limited to a maximum of 5% of contract value. This 'Interest Bearing Recoverable Advance' shall be

payable in not less than two installments with any of the installment not exceeding 60% of the total eligible advance.

- 2.13.2 In exceptional circumstances, with due justification, Competent Authority of BHEL is empowered to approve proposals for payment of additional interim interest bearing advance against Bank Guarantee, for resource augmentation towards expediting work for project implementation.
- 2.13.3 Bank Guarantee towards 'Interest Bearing Recoverable Advance' shall be atleast 110% of the advance so as to enable recovery of not only principle amount but also the interest portion, if so required.
- 2.13.4 Contractor shall establish the utilization of advance drawn before the release of next installment.
- 2.13.5 Payment and recovery of Interest Bearing Recoverable advance shall be at the sole discretion of BHEL and shall not be a subject matter of arbitration.
- 2.13.6 The rate of interest applicable for the above advances shall be the prime lending rate of State Bank of India prevailing at the time of disbursement of the advance + 2%, and such rate will remain fixed till the total advance amount is recovered
- 2.13.7 Unadjusted amount of advances paid shall not exceed 5% of the total contract value at any point of time. Recovery of advances shall be made progressively from each Running Bill such that the advance amounts paid along with the interest is fully recovered by the time the contractor's billing reaches 80% of contract value.
- 2.13.8 Recovery rate per month shall be the sum of:
  - a. Not less than 10% of Running Bill amount
  - b. Simple interest up to the date of RA Bill on the outstanding Principle amount/amounts
- 2.13.9 Contractor to submit Bank Guarantee as per prescribed formats for each of the advance and shall be valid for at least one year or the recovery duration or the balance contract period which ever is later. In case the recovery of dues does not get completed within the aforesaid BG period, the contractor shall renew the BG or submit fresh BG for the outstanding amount and the remaining recovery period.
- 2.13.10 BHEL is entitled to make recovery of the entire outstanding amount in case the contractor fails to comply with the BG requirement

**2.14 QUANTITY VARIATION**

- 2.14.1 The quoted rates shall remain firm irrespective of any variations in the individual quantities. No compensation becomes payable in case the variation of the final executed contract value is within the limits of Plus (+) or Minus (-) 15% of awarded contract value
- 2.14.2 Compensation due to variation of final executed value in excess of the limits defined in clause above, shall be as follows:
  - i) In case the finally executed contract value reduces below the lower limit of Contract Value due to quantity variation specified above, the contractor will be eligible for compensation @ 15% of the difference between the lower limit of the contract value and the actual executed value.
  - ii) In case the finally executed contract value increases above the upper limit of Contract Value

due to quantity variation specified above, there will be no revision in the rates within the contract period.

**2.15 EXTRA WORKS**

2.15.1 All rectifications/modifications, revamping, and reworks required for any reasons not due to the fault of the contractor, or needed due to any change in deviation from drawings and design of equipments, operation/maintenance requirements, mismatching, or due to damages in transit, storage and erection/commissioning, and other allied works which are not very specifically indicated in the drawings, but are found essential for satisfactory completion of the work, will be considered as extra works.

2.15.2 Extra works arising on account of the contractor's fault, irrespective of time consumed in rectification of the damage/loss, will have to be carried out by the contractor free of cost. Under such circumstances, any material and consumable required for this purpose will also have to be arranged by the contractor at his cost.

2.15.3 All the extra work should be carried out by a separately identifiable gang, without affecting routine activities. Daily log sheets in the pro-forma prescribed by BHEL should be maintained and shall be signed by the contractor's representative and BHEL engineer. No claim for extra work will be considered/entertained in the absence of the said supporting documents i.e. daily log sheets. Signing of log sheets by BHEL engineer does not necessarily mean the acceptance of such works as extra works.

2.15.4 BHEL retains the right to award or not to award any of the major repair/ rework/modification/rectification/fabrication works to the contractor, at their discretion without assigning any reason for the same

2.15.5 After eligibility of extra works is established and finally accepted by BHEL engineer/designer, payment will be released on competent authority's approval at the following rate.

**MAN-HOUR RATE FOR ELIGIBLE EXTRA WORKS:** Single composite average labour man-hour rate, including overtime if any, supervision, use of tools and tackles and other site expenses and incidentals, consumables for carrying out any major rework/ repairs/ rectification/ modification/ fabrication as certified by site as may arise during the course of erection, testing, commissioning or extra works arising out of transit, storage and erection damages, payment, if found due will be at Rs 60/- per man hour.

2.15.6 The above composite labour man hour rate towards extra works shall remain firm and not subject to any variation during execution of the work. PVC will not be applicable for extra works. Rate revision, Over Run Charges/compensation etc will not be applicable due to extra works.

2.15.7 **Extra Works for Civil Packages** shall be regulated as follows

i) **Rates for Extra Works arising due to (1) non availability of BOQ (Rate Schedule), OR (2) change in Specifications of materials/works (3) rectification/modification/dismantling & re erecting etc due to no fault of Contractor, shall be in the order of the following:**

- a) Item rates are to be derived from similar nature of items in the BOQ (Rate Schedule) with applicable escalation derived from All India Consumer Price Index for Whole Sale Commodities.
- b) As per CPWD-DSR-2007 (or latest edition) with applicable escalation derived from All India Consumer price Index for Whole Sale Commodities, OR, Notification issued by the office of CPWD for 'Cost Index' in that Region where the project is being executed, whichever is less
- c) Item rates are to be worked out on the basis of prevailing market rates mutually agreed between BHEL and Contractor, plus 15% towards Contractor's overheads and profit.
- ii) PVC and ORC will not applicable be for (i) above.

## 2.16 SUPPLEMENTARY ITEMS

### 2.16.1 For NON Civil Works

Supplementary items are items/works required for completion of entire work but not specified in the scope of work. Subject to certification of such items/works as supplementary items by BHEL Engineer, rates shall be derived on the basis of any one of the following on mutual agreement:

- i) Based on percentage breakup/rates indicated for similar/nearby items
- ii) In case (i) above does not exist, then BHEL/site may derive the percentage breakup/rates to suit the type of work

### 2.16.2 For Civil Works

- i) Rates for Supplementary Works/Additional Works arising out due to additions/alterations in the original scope of works as per contract subject to certification of BHEL Engineer shall be worked out as under:
  - a) Item rates which are available in existing BOQ (Rate Schedule) shall be operated with applicable escalation derived from All India Consumer Price Index for Whole Sale Commodities
  - b) Items of works which are not available in existing BOQ shall be operated as an 'Extra Works' and rate shall be derived as per clause no 2.15.7
- ii) Execution of Supplementary Works/Additional Works through the Contractor shall be at the sole discretion of BHEL, and shall be considered as part of executed contract value for the purpose of Quantity Variation as per clause 2.14
- iii) BHEL Engineer's decision regarding fixing the rate as above is final and binding on the contractor.
- iv) PVC and ORC will not be applicable for (i) above.

## 2.17 PRICE VARIATION COMPENSATION

- 2.17.1 In order to take care of variation in cost of execution of work on either side, due to variation in the index of LABOUR, HIGH SPEED DIESEL OIL, WELDING ROD, CEMENT, STEEL, MATERIALS, Price Variation Formula as described herein shall be applicable
- 2.17.2 85% component of Contract Value shall be permitted to be adjusted for variation in various relevant indices during execution of work. The remaining 15% shall be treated as fixed component
- 2.17.3 The basis for calculation of price variation in each category, their component, Base Index, shall be as under:

SL NO.	CATEGORY	BASE INDEX	COMPONENT ('K')		
			CIVIL PACKAGES (See Note A/B/C)	MECHANICAL PACKAGES	LABOUR ORIENTED

<p style="text-align: center;"><b>Bharat Heavy Electricals Limited</b>            Power Sector - Eastern Region, Kolkata  <b>TENDER NO. PSER:SCT:KGN-S2009:19</b></p>						
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			A	B**	C		PACKAGES (See Note D)
i)	LABOUR (ALL CATEGORIES)	'MONTHLY ALL-INDIA AVERAGE CONSUMER PRICE INDEX NUMBERS FOR INDUSTRIAL WORKERS' published by Labour Bureau, Ministry of Labour and Employment, Government of India. (Website: <a href="http://labourbureau.nic.in">labourbureau.nic.in</a> )	40	25	30	65	80
ii)	HIGH SPEED DIESEL OIL	Name of Commodity : HSD OIL. Type : INDIVIDUAL COMMODITY (See Note F)	5	3	5	5	5
iii)	WELDING ROD	Name of Commodity : WELDING ROD Type: INDIVIDUAL COMMODITY (See Note F)				15	
iv)	CEMENT	Name of Commodity : GREY CEMENT Type: INDIVIDUAL COMMODITY (See Note F)		20	30		
v)	STEEL (Structural and Reinforcement Steel)	Name of Commodity : a1. IRON & SEMIS Type: GROUP ITEM (See Note F)		25			
vi)	MATERIALS (Other than Cement & Steel)	Name of Commodity: ALL COMMODITIES Type: GROUP ITEM (See Note F)	40	12	20		

Note: A) Cement & Steel : Free Issue (BHEL Scope)

B) Cement & Steel : In Contractor Scope {\*\*: unless otherwise specified in Special Conditions of Contract (SCC) }

C) Cement in Contractor Scope, and Steel is Free Issue (BHEL Scope)

D) Predominantly 'Labour Oriented' packages including Material Handling & Management, Insulation, Painting, Electrical and CI or a combination thereof, which are separately tendered and awarded

E) For Composite packages (i.e. Civil+Mechanical+Electrical/CI or Civil+Mechanical or Mechanical+Electrical/CI), the components for various categories shall be as per respective packages

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

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

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

Where

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

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

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

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

X0 = Index no for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials as on the Base date.

2.17.5 Base date shall be calendar month of the latest date of submission of Tender.

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

2.17.7 The contractor shall furnish necessary monthly bulletins for the necessary indices from the relevant websites along with his Bills.

2.17.8 The contractor will be required to raise the bills for price variation payments on a monthly basis along with the running bills irrespective of the fact whether any increase/decrease in the index for relevant categories has taken place or not. In case there is delay in publication of bulletins (final figure), the provisional values as published can be considered for payments and arrears shall be paid/recovered on getting the final values.

2.17.9 PVC shall be applicable for the entire original contract period plus the extended period. However the Total Quantum of Price Variation amount payable/recoverable shall be regulated as follows:

- i) For the portion of backlog attributable to the contractor, the PVC will be based on the average of the indices for the period of the original contract period.
- ii) For the period of Force Majeure, the PVC will be limited to the indices applicable at the beginning of the force majeure period.
- iii) For the portion of backlog attributable to BHEL, the PVC will be as per the indices applicable for the respective months
- iv) The total amount of PVC shall not exceed 20% of the cumulatively executed contract value. Executed contract value for this purpose is exclusive of PVC, ORC, Supplementary/Additional Items and Extra works.

**2.18 INSURANCE**

2.18.1 BHEL/their customer shall arrange for insuring the materials/properties of BHEL/customer covering the risks during transit, storage, erection and commissioning.

2.18.2 It is the sole responsibility of the contractor to insure his materials, equipments, workmen, etc. against accidents and injury while at work and to pay compensation, if any, to workmen as per Workmen's compensation Act. The work will be carried out in a protected area and all the rules and regulations of the client /BHEL in the area of project which are in force from time to time will have to be followed by the contractor.

2.18.3 If due to negligence and or non-observation of safety and other precautions by the contractors, any accident/injury occurs to the property / manpower belong to third party, the contractor shall have to pay necessary compensation and other expense, if so decided by the appropriate authorities.

2.18.4 The contractor will take necessary precautions and due care to protect the material, while in his custody from any damage/ loss due to theft or otherwise till the same is taken over by BHEL or customer. For lodging / processing of insurance claim the contractor will submit necessary documents. BHEL will recover the loss including the deductible franchise from the contractor, in case the damage / loss is due to carelessness / negligence on the part of the contractor. In case of any theft of material under contractor's custody , matter shall be reported to police by the contractor immediately and copy of FIR and subsequently police investigation report shall be submitted to BHEL for taking up with insurance. However this will not relieve the contractor of his

contractual obligation for the material in his custody.

**2.19 STRIKES & LOCKOUT**

2.19.1 The contractor will be fully responsible for all disputes and other issues connected with his labour. In the event of the contractor's labour resorting to strike or the Contractor resorting to lockout and if the strike or lockout declared is not settled within a period of one month, BHEL shall have the right to get the work executed through any other agencies and the cost so incurred by BHEL shall be deducted from the Contractor's bills.

2.19.2 For all purposes whatsoever, the employees of the contractor shall not be deemed to be in the employment of BHEL

**2.20 FORCE MAJEURE**

The following shall amount to Force Majeure:-

2.20.1 Acts of God, act of any Government, War, Sabotage, Riots, Civil commotion, Police action, Revolution, Flood, Fire, Cyclones, Earthquake and Epidemic and other similar causes over which the contractor has no control.

2.20.2 If the contractor suffers delay in the due execution of the contractual obligation due to delays caused by force majeure as defined above, the agreed time of completion of the job covered by this contract or the obligations of the contractor shall be extended by a period of time equal to period of delay, provided that on the occurrence of any such contingency, the contractor immediately reports to BHEL in writing the causes of delay and the contractor shall not be eligible for any compensation.

**2.21 ARBITRATION & RECONCILIATION**

2.21.1 In case amicable settlement is not reached in the event of any dispute or difference arising out of the execution of the Contract or the respective rights and liabilities of the parties or in relation to interpretation of any provision by the Contractor in any manner touching upon the Contract, such dispute or difference shall (except as to any matters, the decision of which is specifically provided for therein) be referred to the sole arbitration of the arbitrator appointed by BHEL/In charge(Region).

The award of the Arbitrator shall be binding upon the parties to the dispute

Subject as aforesaid, the provisions of Arbitration and Reconciliation Act 1996 (India) or statutory modifications or re enactments thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. The venue of the arbitration shall be the place from which the contract is issued or such other place as the Arbitrator at his discretion may determine

2.21.2 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable :

In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred to by either party to the arbitration of one of the arbitrators in the department of public enterprises. The award of the arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the parties hereto finally and conclusively.

2.21.3 The cost of arbitration shall be borne equally by the parties.

2.21.4 Work under the contract shall be continued during the arbitration proceedings

## **2.22 RETENTION AMOUNT**

2.22.1 Retention Amount shall be 5% of executed contract value and shall be recovered at the rate of 5% from each Running Bill admitted, including PVC Bills.

2.22.2 Refund of Retention Amount shall be as follows:

- i) 50% of retention amount along with 'Final Bill'
- ii) Balance 50% of retention amount shall be retained towards 'Performance Guarantee for Workmanship' and shall become refundable after expiry of Guarantee period, provided all the defects noticed during the guarantee period have been rectified to the satisfaction of BHEL Site Engineer/BHEL Construction Manager, and after deducting all expenses/other amounts due to BHEL under the contract/other contracts entered into by BHEL with them. This portion of the retention amount can be released on commencement of the Guarantee period, on submission of equivalent Bank Guarantee.

## **2.23 PAYMENTS**

Payments to Contractors are made in any one of the following forms

### **2.23.1 Running Account Bills (RA Bills)**

- i) These are for interim payments when the contracts are in progress. The bills for such interim payments are to be prepared by Contractor in prescribed formats (RA Bill forms).
- ii) Payments shall be made according to the extent of work done as per measurements taken up to the end of the calendar month and in line with the terms of payments described in the Tender documents
- iii) Recoveries on account of electricity, water, statutory deductions, etc are made as per terms of contract
- iv) Full rates for the work done shall be allowed only if the quantum of work has been done as per the specifications stipulated in the contract. If the work is not executed as per the stipulated specifications, BHEL may ask the contractor to re do the work according to the required specifications, without any extra cost. However, where this is not considered necessary 'OR' where the part work is done due to factors like non-availability of material to be supplied by BHEL 'OR' non availability of fronts 'OR' non availability of drawings, fraction payment against full rate, as is considered reasonable, may be allowed with due regard for the work remaining to be done. BHEL decision in this regard will be final and

binding on the contractor.

v) In order to facilitate part payment, BHEL Site Engineer at his discretion may further split the contracted rates/percentages to suit site conditions, cash flow requirements according to the progress of work

#### 2.23.2 **Final Bill**

'Final Bill' is used for final payment on closing of Running Account for works or for single payment after completion of works. 'Final Bill' shall be submitted as per prescribed format after completion of works as per scope and upon material reconciliation, along with the following.

- i) 'No Claim Certificate' by contractor
- ii) Clearance certificates where ever applicable viz Clearance Certificates from Customer, various Statutory Authorities like Labour department, PF Authorities, Commercial Tax Department, etc
- iii) Indemnity bond as per prescribed format

BHEL shall settle the final bills after deducting all liabilities of Contractor to BHEL

#### 2.24 **PERFORMANCE GUARANTEE FOR WORKMANSHIP**

2.24.1 Even though the work will be carried out under the supervision of BHEL Engineers the Contractor will be responsible for the quality of the workmanship and shall guarantee the work done for a period of twelve months from the date of commencement of guarantee period as defined in Special Conditions of Contract, for good workmanship and shall rectify free of cost all defects due to faulty erection detected during the guarantee period. In the event of the Contractor failing to repair the defective works within the time specified by the Engineer, BHEL may proceed to undertake the repairs of such defective works at the Contractor's risk and cost, without prejudice to any other rights and recover the same from the Guarantee money.

2.24.2 BHEL shall release the guarantee money subject to the following

- i) Contractor has submitted 'Final Bill'
- ii) Guarantee period as per contract has expired
- iii) Contractor has furnished 'No Claim Certificate' in specified format
- iv) BHEL Site Engineer/Construction Manager has furnished the 'No Demand Certificate' in specified format
- v) Contractor has carried out the works required to be carried out by him during the period of Guarantee and all expenses incurred by BHEL on carrying out such works is included for adjustment from the Guarantee money refundable.

#### 2.25 **CLOSING OF CONTRACTS**

The Contract shall be considered completed and closed upon completion of all contractual obligations and settlement of Final Bill or completion of Guarantee period whichever is later. Upon closing of Contract, BHEL shall issue a completion certificate as per standard format, based on specific request of Contractor.

#### 2.26 **REVERSE AUCTION:**

BHEL reserves the right to go for Reverse Auction for Price Bid Opening by BHEL appointed service provider, instead of opening the submitted sealed price bid in the conventional way. The Business Rules for Reverse Auction shall be as per BHEL guidelines issued from time to time.

#### 2.27 **SUSPENSION OF BUSINESS DEALINGS**

BHEL reserves the right to take action against Contractors who either fail to perform or Tenderers/Contractor who indulge in malpractices, by suspending business dealings with them in

line with BHEL guidelines issued from time to time.

**2.28 OTHER ISSUES**

- 2.28.1 Value of Non judicial Stamp Paper for Bank Guarantees and for Contract Agreement shall be not less than Rs 100/- unless otherwise required under relevant statutes.
- 2.28.2 In case of any conflict between the General Conditions of Contract and Special Conditions of Contract, provisions contained in the Special Conditions of Contract shall prevail.
- 2.28.3 Unless otherwise specified in NIT, offers from consortium/JVs shall not be considered.
- 2.28.4 BHEL may not insist for signing of Contract Agreements in respect of low value and short time period contracts like providing services for Hot water flushing, Chemical Cleaning, Transportation, etc

## FORMS & PROCEDURES

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## FORMS & PROCEDURES

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- BANK GUARANTEE FORMATS FOR "RELEASE OF AMOUNTS WITHHELD/ LIQUIDATED DAMAGES AMOUNT", "SUPPLY FREE ISSUE MATERIAL" & "EARNEST MONEY" IS ALSO GIVEN.

## : will be released later

## FORMS & PROCEDURES

Form No: F-01 (Rev 00)

### OFFER FORWARDING LETTER / TENDER SUBMISSION LETTER (To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

Offer Reference No:.....

Date:.....

To,

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

Dear Sir,

Sub : Submission of Offer against Tender Specification No: .....

I/We hereby offer to carry out the work detailed in the Tender Specification issued by Bharat Heavy Electricals Limited, Power Sector-....., in accordance with the terms and conditions thereof.

I/We have carefully perused the following listed documents connected with the above work and agree to abide by the same.

1. Amendments/Clarifications/Corrigenda/Errata/etc issued in respect of the Tender documents by BHEL
2. Notice Inviting Tender (NIT)
3. Price Bid
4. Technical Conditions of Contract
5. Special Conditions of Contract
6. General Conditions of Contract
7. Forms and Procedures

Should our Offer be accepted by BHEL for Award, I/we further agree to furnish 'Security Deposit' for the work as provided for in the Tender Conditions within the stipulated time as may be indicated by BHEL.

I/We further agree to execute all the works referred to in the said Tender documents upon the terms and conditions contained or referred to therein and as detailed in the appendices annexed thereto.

I/We have deposited/depositing herewith the requisite Earnest Money Deposit (EMD) as per details furnished in the Check List.

**Authorised Representative of Bidder**  
Signature :  
Name :  
Address :

Place:

Date:

## FORMS & PROCEDURES

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Form No: F-02 (Rev 00)

### DECLARATION BY AUTHORISED SIGNATORY OF BIDDER

(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,

Sub : **Declaration by Authorised Signatory**

Ref : 1) NIT/Tender Specification No: .....,  
2) All other pertinent issues till date

I/We, hereby certify that all the information and data furnished by me with regard to the above Tender Specification are true and complete to the best of my knowledge. I have gone through the specifications, conditions, stipulations and all other pertinent issues till date, and agree to comply with the requirements and Intent of the specification.

I further certify that I am authorised to represent on behalf of my Company/Firm for the above mentioned tender and a valid Power of Attorney to this effect is also enclosed.

Yours faithfully,

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

Date:

Enclosed : Power of Attorney

## FORMS & PROCEDURES

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Form No: F-03 (Rev 00)

### NO DEVIATION CERTIFICATE

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

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To,

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

Dear Sir,

Sub : **No Deviation Certificate**

Ref : 1) NIT/Tender Specification No: .....,  
2) All other pertinent issues till date

We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred NIT/Tender Specification.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions, Integrity Pact (if applicable) and acceptance to Reverse Auctioning process.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

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

## FORMS & PROCEDURES

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Form No: F-04 (Rev 00)

### DECLARATION CONFIRMING KNOWLEDGE ABOUT SITE CONDITIONS

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

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To,

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

Dear Sir,

Sub : **Declaration confirming knowledge about Site conditions**

Ref : 1) NIT/Tender Specification No: .....,  
2) All other pertinent issues till date

I/We, \_\_\_\_\_ hereby declare and confirm that we have visited the Project Site as referred in BHEL Tender Specifications and acquired full knowledge and information about the Site conditions including Wage structure, Industrial Climate, the Law & Order and other conditions prevalent at and around the Site. We further confirm that the above information is true and correct and we shall not raise any claim of any nature due to lack of knowledge of Site conditions.

I/We, hereby offer to carry out work as detailed in above mentioned Tender Specification, in accordance with Terms & Conditions thereof.

Yours faithfully,

(Signature, Date & Seal of Authorized  
Representative of the Bidder)

Date :

Place:

## FORMS & PROCEDURES

Form No: F-05 (Rev 00)

### DECLARATION FOR RELATION IN BHEL

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder failing which the offer of Bidder is liable to be summarily rejected)

To,

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

Dear Sir,

Sub : **Declaration for relation in BHEL**

Ref : 1) NIT/Tender Specification No: .....

I/We hereby submit the following information pertaining to relation/relatives of Proprieter/Partner(s)/Director(s) employed in BHEL

**Tick(√) any one as applicable:**

1. The Proprieter, Partner(s), Director(s) of our Company/Firm DO NOT have any relation or relatives employed in BHEL

OR

2. The Proprieter, Partner(s), or Director(s) of our Company/Firm HAVE relation/relatives employed in BHEL and their particulars are as below:

(i)

(ii)

Signature of the Authorised Signatory

Note:

1. Attach separate sheet, if necessary.
2. If BHEL Management comes to know at a later date that the information furnished by the Bidder is false, BHEL reserves the right to take suitable action against the Bidder/Contractor.

## FORMS & PROCEDURES

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Form No: F-06 (Rev 00)

### NON DISCLOSURE CERTIFICATE

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

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### *NON DISCLOSURE CERTIFICATE*

I/We understand that BHEL PS \_\_\_ is committed to Information Security Management System as per their Information Security Policy.

Hence, I/We M/s.....  
who are submittting offer for providing services to BHEL PS \_\_\_ against  
Tender Specification No: \_\_\_\_\_, hereby undertake to comply with the following in line with Information Security Policy of BHEL PS \_\_\_,

- To maintain confidentiality of documents & information which shall be used during the execution of the Contract.
- The documents & information shall not be revealed to or shared with third party which shall not be in the business interest of BHEL PS \_\_\_.

(Signature, date & seal of Authorized Signatory of the bidder)

Date:

## FORMS & PROCEDURES

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Form No: F-07 (Rev 00)

### BANK ACCOUNT DETAILS FOR E-PAYMENT

(To be given on Letter head of the Company /Firm of Bidder, and **ENDORSED (SIGNED**  
**& STAMPED) BY THE BANK** to enable BHEL release payments through Electronic Fund Transfer (EFT/RTGS)

---

1. Beneficiary Name : .....
2. Beneficiary Account No. : .....
3. Bank Name & Branch : .....
4. City/Place : .....
5. 9 digit M ICR Code of Bank Branch : .....
6. IFSC Code of Bank Branch : .....
7. Beneficiary E-mail ID : ..  
(for payment confirmation)

NOTE: In case Bank endorsed certificate regarding above has already been submitted earlier, Kindly submit photocopy of the same

## FORMS & PROCEDURES

Form No: F-08 (Rev 00)

### FORMAT FOR SEEKING CLARIFICATION

(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,

Sub : **Request for Clarification**

Ref : 1) NIT/Tender Specification No: .....  
2) All other pertinent issues till date

Sl no	Reference clause of Tender Document	Existing provision	Bidder's query	BHEL's clarification
1				
2				
3				

Yours faithfully,

(Signature, date & seal of Authorized Representative of the Bidder)

## FORMS & PROCEDURES

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## FORMS & PROCEDURES

Form No: F-09 (Rev 00)

### CAPACITY EVALUATION OF BIDDERS FOR CURRENT TENDER

SL NO.	DESCRIPTION OF WORK (Similar to Tendered Scope)	WORK ORDER REF & DATE	CONTRACT VALUE (Rs. LACS)	CUSTOMER NAME & ADDRESS	CURRENT STATUS OF THE JOB ALONG WITH LATEST MILE STONE COMPLETED	%AGE OF WORK COMPLETED	VALUE OF BALANCE WORK (Rs. Lacs)
1							
2							
3							
4							
5							

#### NOTES:

1. BIDDERS ARE REQUIRED TO FURNISH ALL THE JOBS OF SIMILAR NATURE WHICH THEY ARE EXECUTING (IN PROGRESS) AT THE TIME OF SUBMISSION OF TENDER, AS PER ABOVE FORMAT.
2. BIDDERS HEREBY UNDERTAKE THAT THEY HAVE FURNISHED THE DETAILS SOUGHT AS PER POINT NO. 1 IN TOTALITY AND THAT THE DETAILS FURNISHED IS COMPLETE IN ALL RESPECT.
3. BHEL WILL TAKE APPROPRIATE ACTION AS DEEMED FIT, IN CASE, IT IS FOUND AT A LATER DATE THAT THE CONTRACTOR HAD SUPPRESSED THE FACTS AND HAVE NOT FURNISHED THE CORRECT & COMPLETE INFORMATIONS.

Signature

DATE :

PLACE:

Name, Designation & Seal of Bidder

## FORMS & PROCEDURES

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### CONTRACT AGREEMENT

Form No: F-10 (Rev 00)

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BHARAT HEAVY ELECTRICALS LIMITED  
(*A Government of India Undertaking*)  
Power Sector – ..... Region

CONTRACT AGREEMENT

AGREEMENT NO. \_\_\_\_\_

NAME OF WORK	
NAME OF THE CONTRACTOR WITH FULL ADDRESS	
VALUE OF WORK AWARDED	
LETTER OF INTENT NO.	
TIME ALLOTTED FOR COMPLETING THE WORK (DATE OF COMPLETION)	

SIGNATURE OF CONTRACTOR

(SIGNATURE OF BHEL OFFICER )

## FORMS & PROCEDURES

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### CONTRACT AGREEMENT

THIS AGREEMENT MADE THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ between BHARAT HEAVY ELECTRICALS LIMITED (A Government of India Enterprise) a Company incorporated under the Companies Act, 1956, having its Registered Office at BHEL House, Siri Fort New Delhi- 110049 (herein after called BHEL) of the ONE PART.

AND

M/S \_\_\_\_\_ (hereinafter called the 'Contractor') of the SECOND PART.

WHEREAS M/s -----state that they have acquired and possess extensive experience in the field of -----

And Whereas in response to an Invitation to Tender No. ----- issued by BHEL for execution of ----- the contractor submitted their offer No.-----dated -----And whereas BHEL has accepted the offer of the Contractor on terms and conditions specified in the Letter of Intent No.-----dated -----read with the references cited therein.

THIS AGREEMENT WITNESSES AND it is hereby agreed by and between the parties as follows:

1. That the contractor shall execute the work of -----and more particularly described in Tender Specification No -----including Drawings and Specifications (hereinafter called the said works) in accordance with and subject to terms and conditions contained in these presents, instructions to Tenderers, General Conditions of Contract, Special Conditions, Annexures, Letter of Intent dated -----and such other instructions, Drawings, Specifications given to him from time to time by BHEL.
2. The Contractor is required to furnish to BHEL Security deposit in the form of cash/ approved securities/ Bank Guarantee valid upto ----- for a sum of Rs.----- towards satisfactory performance and completion of the Contract.
3. The Contractor has furnished a Bank Guarantee bearing no.-----dated -----for a sum of Rs.-----executed by ----- in favour of BHEL towards Security Deposit valid upto -----

OR

The Contractor has furnished to BHEL an initial Security Deposit of Rs.-----in the form of cash / approved Securities/ B.G No.----- dated ----- for Rs.-----executed by ----- in favour of BHEL valid upto ----- and has agreed for recovery of the balance security deposit by BHEL @ 10% of the value of work done from each running bill till the entire Security Deposit is recovered.

OR

## FORMS & PROCEDURES

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The contractor has furnished to BHEL an initial Security Deposit of Rs.-----(Rs.----- vide Bank draft No.--- -----dated -----and by adjusting EMD of Rs.----- submitted vide Bank draft No.----- dt.-----) and has agreed for recovery of balance Security Deposit by BHEL @ 10% of the value of work done from each running bill till the entire security deposit is recovered.

4. The Contractor hereby agrees to extend the validity of the Bank Guarantee for such further period or periods as may be required by BHEL and if the Contractor fails to obtain such extension(s) from the Bank, the Contractor, shall pay forthwith or accept recovery of Rs.----- from the bills in one installment and the contractor further agrees that failure to extend the validity of the Bank Guarantee or failure to pay the aforesaid amount in the manner specified above shall constitute breach of contract. In addition to above, BHEL shall be entitled to take such action as deemed fit and proper for recovering the said sum of Rs.-----

### OR

In case the contractor furnishes the bank guarantee at a later date the contractor hereby agrees to extend the validity of bank guarantee for such further period or periods as may be required by BHEL and if the contractor fails to obtain such extension(s) from the bank, the contractor shall pay forthwith or accept recovery of the amount of bank guarantee given in lieu of security deposit from the bills in one installment and the contractor further agrees that failure to extend the validity of bank guarantee or failure to pay the aforesaid amount in the manner specified above shall constitute breach of contract. In addition to above, BHEL shall be entitled to take such action as deemed fit and proper for recovering the said sum.

5. That in consideration of the payments to be made to the Contractor by BHEL in accordance with this Agreement the Contractor hereby covenants and undertakes with BHEL that they shall execute, construct, complete the works in conformity, in all respects, with the terms and conditions specified in this Agreement and the documents governing the same.
6. That the Contractor shall be deemed to have carefully examined this Agreement and the documents governing the same and also to have satisfied himself as to the nature and character of the Works to be executed by him.
7. That the Contractor shall carry out and complete the execution of the said works to the entire satisfaction of the Engineer or such other officer authorised by BHEL, within the agreed time schedule, the time of completion being the essence of the Contract.
8. That BHEL shall, after proper scrutiny of the bills submitted by the Contractor, pay to him during the progress of the said works such sum as determined by BHEL in accordance with this Agreement.
9. That this Agreement shall be deemed to have come into force from ----- the date on which the letter of intent has been issued to the Contractor.

## FORMS & PROCEDURES

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10. That whenever under this contract or otherwise, any sum of money shall be recoverable from or payable by the Contractor, the same may be deducted in the manner as set out in the General Conditions of Contract or other conditions governing this Agreement.
11. That all charges on account of Octroi, Terminal and other taxes including sales tax or other duties on material obtained for execution of the said works shall be borne and paid by the Contractor.
12. That BHEL shall be entitled to deduct from the Contractor's running bills or otherwise Income Tax under Section 194 (C) of the Income Tax Act, 1961.
13. That BHEL shall be further entitled to recover from the running bills of the Contractor or otherwise such sum as may be determined by BHEL from time to time in respect of consumables supplied by BHEL, hire charges for tools and plants issued (Where applicable) and any other dues owed by the Contractor.
14. That it is hereby agreed by and between the parties that non-exercise, forbearance or omission of any of the powers conferred on BHEL and /or any of its authorities will not in any manner constitute waiver of the conditions hereto contained in these presents and the liability of the Contractor with respect to compensation payable to BHEL or Contractor's obligations shall remain unaffected.
15. It is clearly understood by and between the parties that in the event of any conflict between the Letter of Intent and other documents governing this Agreement, the provisions in the Letter of Intent shall prevail.
  
16. The following documents
  1. Invitation to Tender No-----  
and the documents specified therein.
  2. Contractor's Offer No-----  
dated-----.
  3. \_\_\_\_\_
  4. \_\_\_\_\_
  5. \_\_\_\_\_
  6. Letter of Intent No \_\_\_\_\_ dated \_\_\_\_\_.  
7. \_\_\_\_\_shall also form part of and govern this Agreement.

IN WITNESS HEREOF, the parties hereto have respectively set their signatures in the presence of

WITNESS

(CONT

RACTOR)

## FORMS & PROCEDURES

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(to be signed by a person holding  
a valid Power of Attorney)

1.

2.

WITNESS (For and on behalf of BHEL)

1.

2.

**PROFORMA OF BANK GUARANTEE (in lieu of SECURITY DEPOSIT)**

In consideration of the Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its Unit at Bharat Heavy Electricals Limited, Power Sector Eastern Region, BHEL Bhawan, Plot No 9/1, DJ Block, Sector-II, Salt lake City, Kolkata – 700091 having agreed to exempt (Name of the Vendor / Contractor / Supplier) having its registered office at \_\_\_\_\_<sup>1</sup> (hereinafter called the said Contractor which term includes supplier), from demand under the terms and conditions of the Contract reference No. \_\_\_\_\_<sup>2</sup> dated \_\_\_\_\_<sup>2</sup> valued at Rs.....<sup>2</sup> ( Rupees -----)<sup>2</sup> for <Nature of the Work<sup>3</sup> (hereinafter called the said Contract) of Security Deposit for the due fulfilment by the said contractor of the terms and conditions contained in the said Contract, on production of a Bank Guarantee for Rs.\_\_\_\_\_<sup>4</sup> (Rupees \_\_\_\_\_ only), we \_\_\_\_\_(indicate the name and address of the Bank) having its Head Office at \_\_\_\_\_(address of the head Office) (hereinafter referred to as the Bank) at the request of \_\_\_\_\_ [Name of Contractor(s)] do hereby undertake to pay to the Employer an amount not exceeding Rs.\_\_\_\_\_ in the event of any breach by the said Contractor(s) of any of the terms and conditions contained in the said Contract.

We, \_\_\_\_\_(indicate the name of the Bank), do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Employer. Any such demand made on the bank, shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.\_\_\_\_\_.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this guarantee shall be a valid discharge of our liability for payment hereunder and the Contractor(s) shall have no claim against us for making such payment.

We, further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claim satisfied or discharged or till \_\_\_\_\_<sup>5</sup> or till the office/Department/Division of Bharat Heavy Electricals Limited certifies that the terms and conditions of the said Contract have been fully and properly carried out by the said contractor(s) and also including the satisfactory performance of the equipment during guarantee period and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the \_\_\_\_\_<sup>6</sup>, (3 months more than the present date of validity of Bank Guarantee) we shall be discharged from all the liability under this guarantee thereafter.

We, \_\_\_\_\_(indicate the name of the Bank)\_\_\_\_\_ further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

We,..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....<sup>7</sup>
- b) This Guarantee shall be valid up to .....<sup>8</sup>
- c) Unless the Bank is served a written claim or demand on or before \_\_\_\_\_<sup>9</sup> (3 months more than the present date of validity of Bank Guarantee) all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, \_\_\_\_\_(indicate the name of the Bank)\_\_\_\_\_ lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Any claim or dispute arising under the terms of this document shall only be enforced or settled in the courts of at Kolkata only.

Date \_\_\_\_\_ Day of \_\_\_\_\_

for \_\_\_\_\_ (indicate the name of the Bank)

(Signature of Authorised signatory)

<sup>1</sup> NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER .

<sup>2</sup> DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

<sup>3</sup> PROJECT/SUPPLY DETAILS

<sup>4</sup> BG AMOUNT IN FIGURES AND WORDS

<sup>5</sup> VALIDITY DATE

<sup>6</sup> DATE OF EXPIRY OF CLAIM PERIOD

<sup>7</sup> BG AMOUNT IN FIGURES AND WORDS.

<sup>8</sup> VALIDITY DATE

<sup>9</sup> DATE OF EXPIRY OF CLAIM PERIOD

**Note:**

1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.
2. In Case of Bank Guarantees submitted by Foreign Vendors-
  - a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
  - b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)
- b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter-Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.

- b.2** In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
- b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
- b.4** The BG should clearly specify that the demand or other document can be presented in electronic form.

## BANK GUARANTEE FOR ADVANCE

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its Unit at Bharat Heavy Electricals Limited, Power Sector Eastern Region, BHEL Bhawan, Plot No 9/1, DJ Block, Sector-II, Salt lake City, Kolkata – 700091 having awarded to Name of the Vendor / Contractor / Supplier having its registered office at \_\_\_\_\_<sup>1</sup> (hereinafter called "the Contractor" which expression shall include its successors and permitted assigns) a contract Ref No.....dated .....<sup>2</sup> valued at Rs.....( Rupees -----) for <Nature of Work> <sup>3</sup>(hereinafter called the 'Contract')

AND WHEREAS the Employer has agreed to advance to the Contractor, a sum of Rs.....(Rupees..... only), equivalent to \_\_\_\_\_% of the said value of the Contract (hereinafter called "the said Advance"), upon the condition, that the said Advance shall be secured by undertaking guarantee for Rs ----- ( Rupees -----)<sup>4</sup> from a Bank as hereinafter appearing.

We, ..... (hereinafter referred to as the Bank), having registered/Head office at ..... and a branch at ..... being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums upto a maximum amount but not exceeding Rs ----- ( Rupees -----).

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Contractors/Supplier shall have no claim against us for making such payment.

We the .....Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We ..... Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractor/Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Contractor/Supplier and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor/Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor/Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

This Guarantee shall remain in force upto and including.....<sup>5</sup> and shall be extended from time to time on the request of the Employer for such period as may be desired by the Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the .....<sup>6</sup> (3 months more than the present date of validity of Bank Guarantee) we shall be discharged from all liabilities under this Guarantee.

We, ..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....<sup>7</sup>
- b) This Guarantee shall be valid up to .....<sup>8</sup>
- c) Unless the Bank is served a written claim or demand on or before .....<sup>9</sup> (3 months more than the present date of validity of Bank Guarantee) all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank

We, \_\_\_\_\_ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

Any claim or dispute arising under the terms of this document shall only be enforced or settled in the courts of at Kolkata only.

For and on behalf of  
(Name of the Bank)

Date.....

Place of Issue.....

<sup>1</sup> NAME OF VENDOR /CONTRACTOR / SUPPLIER

<sup>2</sup> DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

<sup>3</sup> PROJECT/SUPPLY DETAILS

<sup>4</sup> BG AMOUNT IN FIGURES AND WORDS

<sup>5</sup> VALIDITY DATE

<sup>6</sup> DATE OF EXPIRY OF CLAIM PERIOD

<sup>7</sup> BG AMOUNT IN FIGURES AND WORDS

<sup>8</sup> VALIDITY DATE

<sup>9</sup> DATE OF EXPIRY OF CLAIM PERIOD

**Note:**

- 1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.**
- 2. In Case of Bank Guarantees submitted by Foreign Vendors-**
  - a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
  - b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**
    - b.1** In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
    - b.2** **In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank** (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
    - b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
    - b.4** The BG should clearly specify that the demand or other document can be presented in electronic form.

## FORMS & PROCEDURES

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Form No: F-13 (Rev 00)

### FORM for EXTENSION OF VALIDITY OF BANK GUARANTEE

1. To be typed on non judicial Stamp Papers of value as applicable in the State of India from where the BG has been issued or the State of India where the BG shall be operated
2. The non judicial stamp papers shall be purchased in the name of the Party on whose behalf the BG is being issued or the BG issuing Bank

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BANK GUARANTEE No: ..... Date: .....

To

(Write Designation and Address of Officer of BHEL inviting the Tender)

Dear Sir

Sub : Validity of Bank Guarantee No: ..... Dated ..... for  
..... Rs ..... in favour of yourself, expiry date ....., on  
account of M/s ..... in respect of Contract  
Number....., (herein after called the Original bank Guarantee)

At the request of M/s....., we ..... Bank, having its  
branch Office at ..... and having Head office at ....., do  
hereby extend our liability under the above mentioned Bank Guarantee number..... dated  
..... for a further period of ..... Months/years from ..... to expire on  
.....

Except as provided above, all other terms and conditions of the Original Bank Guarantee No  
..... Dated ..... shall remain unaltered and binding on us.

Kindly treat this extension as an integral part of the original Bank Guarantee to which it would be attached.

Yours faithfully

Signature.....

Name & Designation.....

Power of Attorney/Signing Power No

Seal of Bank

Project		Vendor			Package/Unit	
Sl. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#1.01	Cumulative number of days in the month, the nominated Quality Officer or his authorised nominee was not available	QUALITY	1.5		Quality Officer or his authorised nominee should be available for all the days of working at site	Daily Log Book entry/Incident Registers/letter references
#1.02	Number of instances of non- compliance wrt FQP, Standard Drawings, Specifications, E&C Manuals etc.	QUALITY	1.5		No deviation from FQP, Standard Drawings, Specifications, E&C Manuals etc. is allowed without BHEL Engineer's approval.	Daily Log Book entry/Incident Registers/letter references
#1.03	Percentage submission of test certificates for batches of welding electrodes, cement, sand, aggregate, consumable, Paints etc. as applicable for this month OR In case of MM & MH package, monthly checks for Storage/Preservation of material.	QUALITY	1		Submission of 100% Test certificates for materials as per FQP is mandatory. MM & MH package: Storage/Preservation as per manual/procedure.	Daily Log Book entry/Incident Registers/letter references
#1.04	Number of incidences of improper storage & preservation (not in accordance to the guidelines of BHEL MUs or approved FQP) of materials, consumables (viz. gases, welding electrodes & fluxes, fuel etc.) & bought-out items (paints, fasteners etc.) under the custody of the contractor	QUALITY	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#1.05	Rework/ Rejection instances in a month necessitated due to deviation from Standard Drawings /Specifications /Manuals /E&C procedures /FQPs or due to Poor Workmanship by contractor	QUALITY	2		Reworks/ Rejection should be as minimum as possible. Total number of reworks/ rejections due to reasons attributable to contractor.	Daily Log Book entry/Incident Registers/letter references
#1.06	Delay in preparation & submission of signed protocols / log sheets / site register / NDT test reports as per approved FQP/ Qualified Welder List along with photocopies of Welder ID cards / Welder Performance Evaluation records etc. in the month OR in case of MM / MH package reconciliation statement / verification report.	QUALITY	1		Within 2 days of measurements taken or within first 3 working days of next month, as advised by BHEL Engineer	Daily Log Book entry/Incident Registers/letter references
#1.07	Number of instances for Major equipment/product failure due to negligence/improper work/poor workmanship by contractor	QUALITY	1		No such event should happen	Daily Log Book entry/Incident Registers/letter references
#1.08	Total number of complaints received in the month on the quality of finish / aesthetics	QUALITY	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references

Project		Vendor			Package/Unit	
Sl. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#2.01	Cumulative number of days of delay in submission of Plan FOR THE MONTH supported by deployment plan of Major T&Ps and Manpower (as per Form F-14) and relevant construction/layout drawings - like A4 plan / elevation views of plan status for structures / pressure parts/Civil Works, Piping isometrics for piping, Layout / PID / System reference sketch, Unloading / storage plans etc.as applicable.	PERFORMANCE	5		Number of days delayed from second working day of the month	Daily Log Book entry/Incident Registers/letter references
#2.02	Percentage of timely submission of Daily Reports for Progress of work, Resources, Consumables etc.	PERFORMANCE	1.5		Percentage of timely submission of daily reports/ Scheduled date is successive next day for each day	Daily Log Book entry/Incident Registers/letter references
#2.03	Number of days delayed for submission of FQP log sheets / protocols / Monthly Progress Reports for the work executed during the month under measurement	PERFORMANCE	1.5		Number of days delayed/Scheduled date is first 2 working days of next month	Daily Log Book entry/Incident Registers/letter references
#2.04	Percentage Shortfall attributable to contractor w.r.t. "Plan - Shortfall attributable to BHEL" for the month as per Form-14	PERFORMANCE	35		As per Part-A of Form-14	Progress review formats
#2.05	Number of days delayed in submission of Running bills with complete supporting documents (including updated reconciliation statement of BHEL issued material) for the month	PERFORMANCE	2		Number of days delayed / Scheduled date is 7th day of next month	Daily Log Book entry/Incident Registers/letter references
#2.06	Number of times the Top Management of contractor did not respond to critical issues of site, for the month	PERFORMANCE	1		Total number of instances	Daily Log Book entry/Incident Registers/letter references
#2.07	Cumulative number of days in the month the works were stopped / refused on interpretation of contract clauses/scope due to tendency of taking undue advantage by interpreting contract clauses in their favour	PERFORMANCE	2		Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#2.08	Number of times rework was refused by contractor	PERFORMANCE	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references

Project	Vendor			Package/Unit		
Sl. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#2.09	Cumulative number of days in the month recording / logging was not done in daily log / history register / hindrance register / soft form in a PC maintained at BHEL Site Office	PERFORMANCE	1		Cumulative number of days recording or logging was not done / all days of the month	Daily Log Book entry/Incident Registers/letter references
#3.01	Percentage of Manpower Deployed w.r.t. Plan for the month as per Form-14.	RESOURCES	7		As per Part-B2 of Form-14	Daily Log Book entry/Incident Registers/letter references
#3.02	Percentage of T&P Deployed w.r.t. Plan for the month as per Form-14.	RESOURCES	7		As per Part-B1 of Form-14	Daily Log Book entry/Incident Registers/letter references
#3.03	Cumulative number of major instances in the month hampering / affecting progress of work due to breakdown or non-availability of major T&P and MME for the work, under the scope of Contractor	RESOURCES	3		Cumulative number of instances	Daily Log Book entry/Incident Registers/letter references
#3.04	Cumulative number of major instances in the month hampering / affecting progress of work due to non-availability of Consumables/ use of improper consumables under the scope of contractor	RESOURCES	3		Cumulative number of instances	Daily Log Book entry/Incident Registers/letter references
#4.01	Number of non-compliances during the month for Statutory requirements like validity of Labour Licence, Insurance Policy, Labour Insurance, PF, BOCW Compliance etc. and any other applicable laws/ Regulation, Electrical Licence, T&P fitness certificate, Contractors' All Risk Policy etc. as applicable	SITE INFRASTRUCTURE & SERVICE	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#4.02	Cumulative number of days in a month poor illumination is reported at storage area, erection area, pre-assembly area and other designated areas by BHEL site.	SITE INFRASTRUCTURE & SERVICE	0.5		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.03	Cumulative number of days of non-availability of well-maintained toilets facilities for workers (separate for men and women) and non-availability of potable drinking water stations for workers in specified areas.	SITE INFRASTRUCTURE & SERVICE	1		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references

Project		Vendor			Package/Unit	
Sl. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#4.04	Total number of instances in the month, Housekeeping NOT attended to in spite of instructions by BHEL -i.e. removal / disposal of surplus earth / debris / scrap / unused / surplus cable drums / other electrical items / surplus steel items / packing materials, thrown out scrap like weld butts, cotton waste etc. from the working area to identified locations	SITE INFRASTRUCTURE & SERVICE	2		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.05	Total number of instances in a month, Site Office with reasonably good facilities including enough nos. of computers and printers etc. for use by office and supporting staff was not made available/maintained.	SITE INFRASTRUCTURE & SERVICE	0.5		No discrepancy during regular or surprise visits	Photograph and report of the Engineer
#5.01	Number of days delayed in making labour payments for the last month	SITE FINANCE	2		Number of days delayed / Scheduled date is 7th day of next month	Daily Log Book entry/Incident Registers/letter references
#5.02	Number of complaints from labour/ sub supplier/ sub-contractor for non-receipt of payments from contractor	SITE FINANCE	1.5		Total number of complaints or reporting	Daily Log Book entry/Incident Registers/letter references
#5.03	Number of times the site operations were hampered for want of funds at the disposal of site-in-charge.	SITE FINANCE	1.5		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#6.01	Cumulative number of days in a month the nominated Safety Officer was not available	HSE & SA	1		Safety Officer should be available for all the days	Daily Log Book entry/Incident Registers/letter references
#6.02	Shortfall in number of weekly safety meetings in the month conducted or attended by the Safety Officer	HSE & SA	0.5		Safety meetings to be held every week	Copy of Minutes of meeting
#6.03	Level of compliance w.r.t decisions taken in previous Safety meetings	HSE & SA	0.5		Number of consolidated issues discussed in Safety meetings	Copy of Minutes of meeting, Non-compliance intimation documents from BHEL site
#6.04	Delay in submission of monthly report on safety (including electrical safety for equipment & personnel etc.) in the prescribed form	HSE & SA	1		Number of days delayed/Scheduled date is third working day of next month	Daily Log Book entry/Incident Registers/letter references
#6.05	Number of days taken for lodging FIRs from date of occurrence/notice of incident of theft / accident etc.	HSE & SA	0.5		Number of days delayed/Scheduled date is within 24 Hrs of occurrence/notice of incidence	Copy of FIR lodged by Contractor

Project		Vendor			Package/Unit	
Sl. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#6.06	Number of times written(email, letters etc.) warning issued for non-availability/ use of improper Fall protection and rescue arrangement as lifeline, fall arrestors, safety net, hand-railings, covered floors, man-basket, rescue basket & kit etc. by the contractor	HSE & SA	2		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#6.07	Number of times punitive fines imposed for unsafe practices as per contract like non-availability/use of PPEs as safety shoes, helmets, goggles, gloves, lifeline, safety belts etc.	HSE & SA	1		Total number of non-compliances	Non-compliance intimation documents from BHEL site
#6.08	Percentage compliance to Emergency preparedness and response plan: Portable Fire-extinguishers, Buckets, Fire-wardens, display of emergency numbers, mock-drills, Hazard Identification and Risk Assessment(HIRA) etc.	HSE & SA	1		Compliance should be 100% as per HSE Plan or as finalized in Safety Meetings	Non-compliance intimation documents from BHEL site
#6.09	Number of times the agency has defaulted on display of safety posters / safety slogans / safety barriers/emergency numbers etc. in identified areas	HSE & SA	0.5		Total number of instances	Non-compliance intimation documents from BHEL site
#6.10	Non compliances observed during HSE and Safety Audit	HSE & SA	0.5		Total number of non-compliances	Non-compliance intimation documents from BHEL site, Audit Reports
#6.11	Cumulative number of days in the month, non-availability of First Aid Kit, First Aider & Emergency Vehicles/Ambulance.	HSE & SA	0.5		Cumulative number of days	Non-compliance intimation documents from BHEL site
#6.12	Number of days taken for submission of Root Cause analysis (RCA) for the accident from the cut-off date intimated by BHEL for submission of RCA	HSE & SA	0.5		Number of days delayed/Scheduled date is cut-off date intimated by BHEL	Daily Log Book entry/Incident Registers/letter references
#6.13	Non conductance of training (induction, job specific, height work etc.), tool box meeting and health check-up as per Contract requirements	HSE & SA	0.5		Number of incidences of non-conductance during the month	Daily Log Book entry/Incident Registers/letter references
<b>Total</b>			<b>100</b>			

Project	Vendor			Package/Unit		
Sl. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
	Less Deduction in Score Due to Major Accidents (Fatal, Permanent Disability or bodily injury by which person injured is prevented to resume to work within 48 hours or more after accident,, Major Damage to Equipment etc.) attributable to the contractor @ 3 points/ accident					
	Less Deduction in Score Due to Minor Accidents attributable to the contractor @ 1 point/ accident					
	Less Deduction in Score Due to not Maintaining of Labour Colony (if applicable) as per BHEL HSE policy @2 points in a month on verification any day					
	Final Score					

Performance Score Summary for the Month	Total Score	Score Obtained
QUALITY	10	
PERFORMANCE	50	
RESOURCES	20	
SITE INFRASTRUCTURE & SERVICE	5	
SITE FINANCE	5	
HSE & SA	10	
OTHERS (deductions if any)	0	
<b>TOTAL</b>	<b>100</b>	

Note:

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

## FORMS & PROCEDURES

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Form No: F-19 (Rev 00)

### MILESTONE COMPLETION CERTIFICATE (issued by BHEL on the specific request of Contractor)

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Ref :

Date:

To,

(Name & address of Contractor)

Dear Sir,

#### References

1. Contract No:
2. Job Description:

This is to hereby confirm that the following Milestone Activity has been achieved in respect of the Contract /Job under reference

SI No	Milestone Activity	Remarks

This certificate is issued as per your request vide letter no ..... without any prejudice to the rights of BHEL in line with the terms and conditions of the above referred Contract

Yours faithfully,

For and on behalf of Bharat Heavy Electricals Limited

Construction Manager/Head (Subcontracts)

## FORMS & PROCEDURES

Form No: F-20 (Rev 01)

### CONTRACT COMPLETION CERTIFICATE (Issued by BHEL/HQ on the specific request of Contractor)

Ref :

Date:

#### To Whom so ever it may concern

1	DESCRIPTION OF WORK	
2	NAME AND ADDRESS OF THE CONTRACTOR	
3	CONTRACT NO	
4	CONTRACT VALUE	
5	LETTER OF INTENT NO & DATE	
6	CONTRACT PERIOD//CONTRACT DURATION	
7	DATE OF START/COMPLETION	
8	FINAL EXECUTED VALUE	
9	PERFORMANCE	GOOD SATISFACTORY UNSATISFACTORY

This certificate is issued as per your request vide letter no .....  
without any prejudice to the rights of BHEL to use this certificate for evaluation of your offers for future tenders

Yours faithfully,

For and on behalf of Bharat Heavy Electricals Limited

Head (Subcontracts)

## FORMS & PROCEDURES

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Form No: F-21 (Rev 00)

### INDEMNITY BOND

(To be executed on a Non Judicial Stamp Paper of the requisite value as per Stamp Duty prevalent in the respective State)

This Indemnity Bond executed by <name of company> having their Registered Office at <xxxxxxxxxx> in favour of M/s Bharat Heavy Electricals Limited, a Company incorporated under the Companies Act, 1956, having its Registered Office at BH EL House, Siri Fort, Asiad, New Delhi - 110049 through its Unit at Power Sector Region, \_\_\_\_\_, \_\_\_\_\_ State.

(Hereinafter referred to as the Company)

And whereas the Company has entered into a Contract with M/s xxxxxxxxx, the executants of this Deed (hereinafter referred to as the Contractor) as its contractor in respect of the work of "xxxxxxxxxxxxxxxxxxxxxxxxxxxxx".

AND WHEREAS under the provisions of G CC further stipulates that the Contractor shall indemnify the Company against all claims of whatever nature arising during the course of execution of Contract including defects liability period of <xx Months> i.e till <xx xx xxxx>

Now this deed witnesses that in case the Company is made liable by any Authority including Court to pay any claim or compensation etc. in respect of all labourers or other matters at any stage under or relating to the Contract with the Contractor, the Contractor hereby covenants and agrees with the Company that they shall indemnify and reimburse the Company to the extent of such payments and for any fee, including litigation charges, lawyers' fees, etc, penalty or damages claimed against the Company by reason of the Contractor failing to comply with Central/States Laws, Rules etc, or his failure to comply with Contract (including all expenses and charges incurred by the Company).

The Contractor further indemnifies the Company for the amount which the Company may be liable to pay by way of penalty for not making deductions from the Bills of the Contractor towards such amount and depositing the same in the Government Treasury.

## FORMS & PROCEDURES

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The Contractor further agree that the Company shall be entitled to withhold and adjust the Security Deposit and/or withhold and adjust payment of Bills of Contractor pertaining to this Contract against any payment which the Company has made or is required to make for which the Contractor is liable under the Contract and that such amount can be withheld, adjusted by the Company till satisfactory and final settlement of all pending matters and the Contractor hereby gives his consent for the same.

The Contractor further agrees that the terms of indemnity shall survive the termination or completion of this contract.

The contractor further agrees that the liability of the contractor shall be extended on actual basis notwithstanding the limitations of liability clause, in respect of :

1. breach of terms of contract by the contractor
2. breach of laws by the contractor
3. breach of Intellectual property rights by the contractor
4. breach of confidentiality by the contractor

Nothing contained in this deed, shall be construed as absolving or limiting the liability of the Contractor under said Contract between the Company and the Contractor. That this Indemnity Bond is irrevocable and the condition of the bond is that the Contractor shall duly and punctually comply with the terms and the conditions of this deed and contractual provisions to the satisfaction of the Company.

In witness where of M/s xxxxxxxxxxxx these presents on the day, month and year first, above written at xxxxxxxx by the hand of its signatory Mr. xxxxxxxxxxxx.

Signed for and on behalf of  
M/s xxxxxxxxxxxxxxxx

Witness:

1  
2

## FORMS & PROCEDURES

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Form No: F-22 (Rev 00)

### CONSORTIUM AGREEMENT

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(To be executed on Rs. 50/- Non – Judicial Stamp Paper)

THIS AGREEMENT is made and executed on this \_\_\_\_\_ day of \_\_\_\_\_, by and between (1) M/s \_\_\_\_\_, ( The First Party, i.e, the Bidder) a company incorporated under the Company's Act 1956, having its registered office at \_\_\_\_\_ (herein after called the "Bidder", which expression shall include its' successors, administrators, executors and permitted assigns) and (2) M/s \_\_\_\_\_, (The Second Party, i.e, the associates ), a company incorporated under the Company's Act 1956, having its registered office at \_\_\_\_\_ (herein after called the " Associates", which expression shall include its' successors, administrators, executors and permitted assigns).

WHEAEAS the Owner, Bharat Heavy Electricals Ltd, a Government of India Undertaking, proposes to issue / issued an NIT (herein after referred to as the said NIT) inviting bids from the individual Bidders for undertaking the work \_\_\_\_\_, at \_\_\_\_\_ (herein after referred to as the said works).

WHEREAS the said NIT enables submission of a bid by a Consortium subject to fulfillment of the stipulations specified in the said NIT.

AND WHEREAS M/s \_\_\_\_\_ ( The First Party, i.e, the Bidder) will submit its proposal in response to the aforesaid invitation to bid by the Owner for \_\_\_\_\_ as detailed in the Bid doc. no. < TENDER REF----->

## FORMS & PROCEDURES

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AND WHEREAS M/s \_\_\_\_\_ (The First Party, i.e the Bidder) itself is meeting all the qualifying requirements except the qualifying requirements of \_\_\_\_\_ (as detailed in the NIT) and in order to fully meet the qualifying requirements of NIT, this tie-up agreement is \_\_\_\_\_ being entered into with M/s \_\_\_\_\_ (The Second Party, the Associates) , who fully meet the balance part of the said work s (\_\_\_\_\_).

WHEREAS the First Party and the Second Party are contractors engaged in the business of carrying out various items of works. WHEREAS the two parties have agreed to constitute themselves into a consortium for the purpose of carrying out the said works, and that the consortium will be continued till the completion of the works in all respects.

WHEREAS the parties have agreed to certain terms and conditions in this regard:

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS :

1. First and Second parties hereby constitute themselves into a Consortium for the purpose of bidding and undertaking the said works pursuant to the said NIT as hereinafter stated.
2. The First Party will be the leader (Lead Partner) and will be responsible for the entire works.

## FORMS & PROCEDURES

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### **CONSORTIUM AGREEMENT**

3. The First Party shall undertake the following part(s) of work detailed in the NIT namely

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4. The Second Party shall undertake the following part(s) of work detailed in the said NIT namely

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5. The parties hereby declare and confirm that each of them will fulfill the required minimum qualifying requirements as prescribed in the said NIT for the works agreed to be undertaken by them as stated here-in-above.

6. It is also agreed between the parties hereto that all of them shall be individually and severally responsible for the completion of the said works as per the schedule. Further, if the Employer/Owner sustains any loss or damage on account of any breach of the Contracts, we the, Consortium partners individually and severally undertake to promptly indemnify and pay such losses / damages caused to the Employer/Owner on its written demand without any demur, reservation, contest or protest in any manner whatsoever.

7. The parties hereby agree and undertake that they shall provide adequate finances, suitable Tools, Plants, Tractors, Trailers, other transportation equipment, other Tools & Plants, Measuring & Monitoring Equipments (MMEs), Men and Machinery etc. for the proper and effective execution of the works to be undertaken by them as specified here-in-above.

## FORMS & PROCEDURES

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8. It is agreed inter se between the parties hereto that all the consequences liabilities etc., arising out of any default in the due execution of the said works shall be borne by the party in default, that is by party in whose area of works default has occurred, provided however, so far as M/s Bharat Heavy Electricals Limited is concerned, all the parties shall be liable jointly and severally.

IN WITNESS HEREOF the parties above named have signed this agreement on the day month and year first above written at \_\_\_\_\_(Place) .

WITNESS For

1. NAME (FIRST) PARTY

2. OFFICIAL ADDRESS

WITNESS For

1. NAME (SECOND) PARTY

2. OFFICIAL ADDRESS

[The successful bidder shall have to execute the " JOINT DEED OF  
UNDERTAKING " in the format to be made available by BHEL at the time of  
awarding].

## FORMS & PROCEDURES

Form No: F-23 (Rev 00)  
**REFUND OF SECURITY DEPOSIT**

To,  
The Construction Manager  
BHEL Site Office

Dear Sir,

Sub : **Refund of Security Deposit**

Ref : Contract No: .....

Work:.....

I/We have submitted Final Bill in respect of the above Contract/Work vide our letter no:.....  
dated ..... In line with Tender conditions (GCC clause no 1.11), kindly arrange to release/refund the Security Deposit along with Final Bill payments.

The details of Security Deposit are as below:

1. Cash Portion :
2. BG Portion :

Thanking You

Date: \_\_\_\_\_

Authorised representative of Contractor

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**To be filled up by BHEL**

1. Security Deposit to be refunded:
  - a. Cash Portion:
  - b. BG Portion :
2. Less
  - a. Amount spent by BHEL on behalf of Contractor:
  - b. Payments made by BHEL on behalf of Contractor:
  - c. Other recoveries for Services etc
  - d. Any other recoveries
  - e. Total of 'a' to 'd':
3. Net Amount to be released (1-2) :
4. Certified that
  - a. The payment recommended for release is in order and there are no demands other than those included in the claim outstanding from the Contractor
  - b. Contract Guarantee period of ..... Months commenced wef : \_\_\_\_\_
  - c. All objections raised so far have been settled
  - d. A note for refund of Security Deposit has been made in the Measurement Book

Signature of BHEL Engineer

Construction Manager

Date:-----

## FORMS & PROCEDURES

Form No: F-24 (Rev 00)

### **REFUND OF GUARANTEE MONEY**

**BHARAT HEAVY ELECTRICALS LIMITED  
POWER SECTOR, \_\_\_\_\_ REGION**

Ref No:

Date:

1. Name and Address of Contractor : \_\_\_\_\_
2. Contract Agreement/LOI No : \_\_\_\_\_
3. Date of Contract Agreement/LOI : \_\_\_\_\_
4. Name of the Work undertaken : \_\_\_\_\_
5. Date of commencement of the Work : \_\_\_\_\_
6. Date of Completion of the Work : \_\_\_\_\_
7. Period of Maintenance :  
(Guarantee Period)  
\_\_\_\_\_
8. Date on which the Final Bill was paid : \_\_\_\_\_
9. Last date of making good the defect :  
during Maintenance Period  
\_\_\_\_\_
10. Expenditure incurred by BHEL during :  
Maintenance Period, if any, recoverable  
\_\_\_\_\_
11. Date on which Guarantee Money refund:  
falls due as per Contract  
\_\_\_\_\_
12. Amount of Guarantee Money to be refunded:  
\_\_\_\_\_
13. Less Amounts recoverable (with details)
  - a. Amount spent by BHEL on maintenance : \_\_\_\_\_
  - b. Payments made by BHEL on behalf of Contractor: \_\_\_\_\_
  - c. Court dues/penalties/compensation : \_\_\_\_\_
  - d. Other recoveries for Services, etc : \_\_\_\_\_
  - e. Total of 'a' to 'd' : \_\_\_\_\_
14. Net Amount recommended for release (12-13) : \_\_\_\_\_

## FORMS & PROCEDURES

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Signature of BHEL Engineer

Date: \_\_\_\_\_

### **CERTIFICATE TO BE FURNISHED BY THE CONTRACTOR**

I/We have no claim or demand outstanding against BHEL \_\_\_\_\_, for the work done or for labour or material supplied or any other account arising out of or connected with the Contract Agreement/LOI (No \_\_\_\_\_ dated \_\_\_\_\_) and the payment of this bill shall be in full and final settlement of all my/our claims and demands including the 'Deposits' of the Contract Agreement/LOI referred to.

Signature of Contractor

Date: \_\_\_\_\_

### **CERTIFICATE TO BE FURNISHED BY SENIOR ENGINEER/CONSTRUCTION MANAGER**

1. Certified that

- a. The payment recommended for release is in order and there are no demands other than those included in the claim outstanding from the Contractor
- b. Maintenance period (Contract Guarantee period) is over and the Contractor has carried out the works required to be carried out by him during the period of maintenance (Guarantee) to our satisfaction, and all expenses incurred by the Company on carrying out such works have been included for adjustment
- c. All objections raised so far have been settled
- d. A note for refund of Guarantee Amount has been made in the Measurement Book and Contract Agreement/Work Order

Signature of BHEL Engineer

Construction Manager

Date: \_\_\_\_\_

### **FOR USE IN ACCOUNTS DEPARTMENT**

Passed for Rs \_\_\_\_\_ ( Rupees \_\_\_\_\_ only)

Accountant

Accounts Officer

### **ACKNOWLEDGE BY THE CONTRACTOR**

Received Rs \_\_\_\_\_ in full and final settlement of my/our claim

Signature of Contractor

Date: \_\_\_\_\_

## FORMS & PROCEDURES

Form No. F-25 (Rev 00)

## POWER OF ATTORNEY for SUBMISSION OF TENDER/SIGNING CONTRACT AGREEMENT

(To be typed on non judicial Stamp Papers of appropriate value as applicable and Notarised)

KNOW ALL MEN BY THESE PRESENTS, that I/We do hereby make, no minate, constitute and appoint Mr ..... , whose signatur e given below herewith to be true and lawful Attorney of M/s..... hereinafter call ed 'Company', for submitting Ten der/entering into Contract and inter alia, sign, execute all papers and to do nec essary lawful acts on behalf of C ompany with M/s Bhar at Heavy Electricals Ltd, Power Sector Region, , in connection with

..... vide Tender Specification No :  
..... , dated .....

And the C company do hereby agree to ratify and confirm all acts, deeds, things or proceedings as may be lawfully done by the said attorney and by or on behalf of the company and in the name of the company, by virtue of the powers conferred herein and the same shall be binding on the company and shall have full force and effect.

IN WITNESS WHEREOF the common seal of the company has been hereunto affixed in the manner hereinafter appearing on the document.

Dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_

### Director/CMD/Partner/Proprietor

Signature of Mr. .... (Attorney)

Attested by: Director/CMD/Partner/Proprietor

## Witness

## Notary Public

## FORMS & PROCEDURES

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Form No: F-26 (Rev 00)

### ANALYSIS OF UNIT RATES QUOTED

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

Offer Reference No:.....

Date:.....

To,

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

Dear Sir,

Sub : Analysis of Unit Rates Quoted

Ref : Tender Specification No: .....

Analysis of Unit Rates quoted by us in respect of above Tender is as detailed

SN	DESCRIPTION	% OF QUOTED RATE	REMARKS
01	SITE FACILITIES VIZ., ELECTRICITY, WATER OTHER INFRASTRUCTURE.		
02	SALARY AND WAGES + RETRENCHMENT BENEFITS		
03	CONSUMABLES		
04	T&P DEPRECIATION & MAINTENANCE		
05	ESTABLISHMENT & ADMINISTRATIVE EXPENSES		
06	OVERHEADS		
07	PROFIT		
	<b>TOTAL</b>	100%	

Yours faithfully,

(Signature, Date & Seal of Authorized  
Representative of the Bidder)

## FORMS & PROCEDURES

Form WAM 6

### BHARAT HEAVY ELECTRICALS LIMITED DIVISION.....

#### Running Account Bill

(Para 4.31.1 of Works Accounts Manual)

Name of the Contractor:

Departmental Bill no:

Date:

Name of the Work:

Division:

Sub-Division:

Sanctioned Estimate:

Date of written order to commence the work :

Code No:

Date of commencement of the Work:

Contract Agreement No :

Dated:

Due date of completion as per Agreement:

#### 1. ACCOUNT OF WORK EXECUTED

On account payment for work not previously previously measured**			Item No of	Description of Work	Quantity as per agree- ment	Quantity executed up to date	Rate	Unit	Payment on the basis of actual measure- ment up to date	Quantity since last running account bill	Payment on the basis of actual measurement since last running account bill	Remarks
<hr/>												
Total	since last	Total										
As per	running	up to										
Running	account	date										
Account												
bill												
Rs.	Rs.	Rs.					Rs.	P.	Rs.	P.	Rs.	P.
1	2	3	4	5	6	7	8	9	10	11	12	13

\*\*1. Whenever payment is made on 'on account' basis without actual measurements the amount in whole rupees should be entered in columns 1 to 3 only and not in columns 7 to 12.

2. whenever there is an entry in column 12 on the basis of actual measurement, the whole of the amount previously paid without detailed measurement should be adjusted by a minus entry in column 2 equivalent to the amount shown in column 1, so that the total up to date in column 4 may become nil.

## FORMS & PROCEDURES

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Form WAM 6 (contd...)

1	2	3	4	5	6	7	8	9	10	11	12	13
---	---	---	---	---	---	---	---	---	----	----	----	----

Total value of work done up to date (A) ...

Running Account Bill  
Deduct value of work shown on the last  
(B) ...

Net value of work done since last (C) ...

Rupees (in words)

.....only.

## FORMS & PROCEDURES

Form WAM 6 (contd...)

### II. MEMORANDUM OF PAYMENTS

		I	II
		Rs. P.	Rs. P.
1. Total value of work actually measured as per Account No. I. Column 10	(A)	.....	.....
2. Total up to date 'on account' payment for work covered by approximate Or plan measurements as per Account No. I, Column 3	(B)	.....	.....
3. Total up to date secured advances on security of materials as per column 8 Of the enclosed Account (Form WAM 10)	(C)	.....	.....
4. Total up to date payments [(A) + (B) + (C)]	(D)	.....	.....
5. Total amount of payments already made as per Entry (D) of last Running Account Bill No..... Dated.....forwarde to the Accounts Office on .....	(E)	.....	.....
6. Balance [(D)-(E)]		.....	.....
7. Payments now to be made:			
a) by cash/cheque		.....	.....
b) by deduction for value of materials supplied		.....	.....
c) by BHEL vide Annexure A attached		.....	.....
d) by deduction for hire of tools and plant vide		.....	.....

## FORMS & PROCEDURES

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Annexure B attached .....

e) by deduction for other charges vide Annexure C

Attached .....

f) by deduction on account of security deposit .....

h) by deduction on account of Income Tax .....

Note: Amounts relating to items 4 to 6 above should be entered in column II and those relating to item 7 in column I. The amount shown against item 6 and the total of item 7 should agree with each other.

### III.CERTIFICATE OF THE ENGINEER IN CHARGE

Form WAM 6 (contd...)

1. The measurements on which the entries in column 7 to 12 of Part I of this Bill (Account of work executed) are based were made by.....and are recorded at pages.....of  
(Name and Designation)

Measurement Book No .....

2. Certified that the methods of measurement are correct and the work has been carried out in accordance with the terms and conditions, schedules, specifications and drawings etc, forming part of the contract agreement, subject to deviations included in the deviation statement (Annexure D).

3. Certified that in addition to and quite apart from the quantities of work actually executed as shown in column 10 of Part I, some work has actually been done in connection with several items and the value of such work is, in no case, less than 'on account' payments as per column 3 of Part I, made or proposed to be made, for the convenience of the contractor in anticipation of, and subject to the results of, detailed measurement which will be made as soon as possible.

Signature of Contractor

Signature of Engineer in charge

Date:

Designation:

Date:

## FORMS & PROCEDURES

### IV. CERTIFICATE OF THE SENIOR ENGINEER

1. Certified that measurements have been checked measured to the prescribed extent by ..... at site and also by the undersigned and the relevant entries have been intialled in the Measurement book. (vide pages.....)  
(Name and Designation)

2. Certified that all the measurements recorded in the measurement book have been correctly billed for  
3. Certified that all recoverable amounts in respect of materials tools and plant etc, and other charges have been correctly made vide Annexures A to C attached.  
Certified for payment \* of Rs.....( Rupees.....only)  
To be paid in cash/by cheque in the presence of .....

#### ALLOCATION

The expenditure is chargeable as under and to be included in the accounts for.....	20.....
Ledger Head	Debit (Gross amount)
	Rs. P.
Total	

\* Here specify the net amount payable.

Signature of Senior Engineer  
Date:

Form WAM 6 (contd...)

### V.ENTRIES TO BE MADE IN THE ACCOUNTS OFFICE

Accounts Bill No .....Dated.....  
Entered in Journal Book vide entry No.....Dated.....  
Passed for.....Rs.....  
Less Deductions.....Rs.....  
Net Amount Payable.....Rs.....  
(Rupees.....only)  
Payable to Shri/M/s.....by cheque/cash  
Entered in Contractor's Ledger No.....Page.....

Estimate No: Name of the Work:	ALLOCATION		Code no:
	Ledger Head	Debit (Gross amount)	Credit (Deductions)
	Rs. P.	Rs. P.	Rs. P.
-----	-----	-----	-----
-----	-----	-----	-----

## FORMS & PROCEDURES

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Assistant Date:	Accountant Date:	Account Officer Date:	Total	-----	-----
--------------------	---------------------	--------------------------	-------	-------	-------

---

VI. Received Rs.....( Rupees.....only) as per  
Memorandum of Payments on account of this work.

Signature of witness Address :	Revenue	Stamp Signature of Contractor Date:
Date:		

---

### VII. ENTRIES TO BE MADE BY TREASURY SECTION

Cash Book entry No. and date:	Amount paid	Rs.....
	Amount unpaid	Rs.....
	Total	Rs.....

Signature of Cashier  
Date:

Form WAM 6 (contd...)

### ANNEXURE A

## FORMS & PROCEDURES

Statement showing details of materials issued to the contractor Shri/M/s.....

In respect of Contract Agreement No .....Dated.....

Sl. No.	Stores issue Voucher No. and date and date	Issue voucher No. and date allotted by stores to the SIV	Description of material issued to the contractor	Quantity issued	Quantity actually incorp- ated in the work	Whether recover- able from the contrac- tor or supplied	If recoverable from the contractor				R E M A R K S
							Rate at which recover- able	Amount recover- able	Amount recover- ed up to previous bill	Balance now recover- ed	
free											
1	2	3	4	5	6	7	Rs. P.	Rs. P.	Rs. P.	Rs. P.	
-----											
Total -----											

Signature of contractor

Signature of Engineer in Charge

Signature of Senior Engineer

Date:

Date:

Date:

## FORMS & PROCEDURES

### Form WAM 6 (contd...)

## ANNEXURE B

Statement showing tools and plant issued to the contractor Shri/M/s.....

In respect of Contract Agreement No ..... Dated .....

Sl. No	Description of tools and plant issued	Period for which	Rate at which	Amount recover- able	Amount recovered	Balance now	Remarks
		Issued	recovery	able	upto	recovered	
			Is to be		previous		
			Made		bill		
			Rs. P.	Rs. P.	Rs. P.	Rs. P.	

## FORMS & PROCEDURES

---

Form WAM 6 (contd...)

### ANNEXURE C

Statement showing details of other recoveries to be made from the contractor Shri/M/s.....

In respect of Contract Agreement No ..... Dated.....

---

Sl. No	Particulars	Unit	Quantity	Rate	Amount recover- able	Amount recovered upto pre- vious bill	Amount now	Remarks
1	2	3	4	5	Rs. P.	Rs. P.	Rs. P.	Rs. P.
1.	Water Charges							
2.	Electricity charges							
3.	Seignorage charges							
4.	Medical charges							
5.	Cost of empty gunny bags and Empty containers not returned							
6.								
7.								
8.								
9.								

---

## FORMS & PROCEDURES

---

10.

Total

---

Signature of contractor

Signature of Engineer in Charge

Signature of Senior Engineer

Date:

Date:

Date:

## FORMS & PROCEDURES

Form WAM 6 (contd...)

### ANNEXURE D

Name of the Contractor:

Contract Agreement No:

Name of the Work:

Date:

Sl. No.	Description of item	Unit	Quantity as per Agreement	Quantity as executed	Quantity further anticipated	Total quantity anticipated on completion	Rate as per agreement Rs. P.
1	2	3	4	5	6	7	8

Rate as the executed with any	Amount as per agreement	Amount as executed	Amount further anticipated	Total amount anticipated	Difference		Reason for deviation authority, if
					Rs. P.	Rs. P.	
9	10	11	12	13	14	15	16

Signature of Engineer in Charge

Date:

Signature of Senior Engineer

Date:

## FORMS & PROCEDURES

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**BHARAT HEAVY ELECTRICALS LIMITED,  
POWER SECTOR - EASTERN REGION, KOLKATA  
TENDER NO. PSER:SCT:KGN-S2009:19**

**BHARAT HEAVY ELECTRICALS LIMITED,  
POWER SECTOR - EASTERN REGION, KOLKATA  
TENDER NO. PSER:SCT:KGN-S2009:19**

**BHARAT HEAVY ELECTRICALS LIMITED,  
POWER SECTOR - EASTERN REGION, KOLKATA  
TENDER NO. PSER:SCT:KGN-S2009:19**

II MEMORANDUM OF PAYMENT									
									Rs. P
1	Total Value of work actually measured as per Account no I column 10					(A)			
2	Deduct amount of payments already made as per last running account bill No ..... Dated.....					(B)			
3	Payments now to be made { (A) - (B)}					(C)			
4	Deduct amounts recoverable from the contractor on account of :					Rs	P		
a	Material suplied by BHEL vide annexure A attached								
b	Hire of Tools & Plants vide Annexure B attached								
c	Other charges vide Annexure C attached								
d	Income Tax								
Total deduction									
5	Balance								
6	Refund of 50% of security deposite on completion of work								
7	Net amount to be paid to the Contractor								



**BHARAT HEAVY ELECTRICALS LIMITED,  
POWER SECTOR - EASTERN REGION, KOLKATA  
TENDER NO. PSER:SCT:KGN-S2009:19**

## **V. ENTRIES TO BE MADE IN THE ACCOUNTS OFFICE**

Account Bill no..... Dated .....

Entered in Journal book vide entry No..... Dated.....

Passed for..... Rs.....

Less Deductions..... Rs.....

(Rupees..... Only)

Payable to Shri/M/s..... by cheque/cash

Entered in contractors' Ledger no..... Page

Assistant Date:	Accountant Date:	Accounts officer Date:
--------------------	---------------------	---------------------------

VI. Received Rs.....(Rupees.....Only) in full and final settlement of all moneys due under this contract and I / we have no further claims of this contract.

| Signature of Witness

### Address

<b>ALLOCATION</b>			
Estimate No:	Code No		
Name of the Work .....			
Ledger Head	Debit		Credit
	(Gross Amount)		
	Rs	P	(Deduction)
			Rs

**Total** ..... ....

Revenue Stamp  
Signature of Contractor  
Date:

## VII. ENTRIES TO BE MADE BY TREASURY SECTION

**Cash book entry no and date :**

Amount Paid Rs.....  
Amount unpaid Rs.....  
Total Rs.....

**Signature of Cashier**  
**Date:**

Date: \_\_\_\_\_

---

## ANNEXURE A

## Part I

Statement showing details of material issued to the contractor Shri/M/s..... In respect of Contract  
Agreement/Work Order No..... Dated .....

## ANNEXURE A

## Part II

Statement showing details of material issued to the contractor Shri/M/s..... in respect of Contract  
Agreement/Work Order No..... Dated ..... and not covered by the agreement

## ANNEXURE B

Statement showing TOOLS & PLANTS issued to the contractor Shri/M/s..... in respect of Contract  
Agreement/Work Order No..... Dated ..... and not covered by the agreement

**BHARAT HEAVY ELECTRICALS LIMITED,  
POWER SECTOR - EASTERN REGION, KOLKATA  
TENDER NO. PSER:SCT:KGN-S2009:19**



BHARAT HEAVY ELECTRICALS LIMITED  
 DIVISION.....

.....And Final bill

(Para 4.3.2 Of Works Accounts Manual)

Name of Contractor		Departmental Bill no		Date	
Name of the Work		Division		Division	
Sanctioned Estimate		Date of written order to commence the work			
Contract Agreement/work Order No		Date of commencement of work			
		Due date of completion as per agreement			
		Date of actual completion of the work			

**I. ACCOUNT OF WORK EXECUTED**

On Account payment for the work not previously measured **			Item No of the agreement/ work order	Description of work	Quantity as per agreement	Quantity executed up to date	Rate Rs. P	Unit	Payment on the basis of actual measurement up to date Rs P	Quantity since last running account bill	Payment on the basis of actual measurement since last running account bill Rs P	Remarks
Total as per last running account bill Rs.	Since last running account bill Rs	Total up to date Rs										
1	2	3	4	5	6	7	8	9	10	11	12	13

BHARAT HEAVY ELECTRICALS LIMITED,  
POWER SECTOR - EASTERN REGION, KOLKATA  
TENDER NO. PSER:SCT:KGN-S2009:19

1	2	3	4	5	6	7	8	9	10	11	12	13
---	---	---	---	---	---	---	---	---	----	----	----	----

Total Value of Work Done up to date	(A)	
Deduct Value of work shown on the last running account bill	(B)	
Net value of work done since last running account bill	(C)	

Rupees (In Words).....Only

**II MEMORANDUM OF PAYMENT**

		Rs.	P
1	Total Value of work actually measured as per Account no I column 10	(A)	
	Deduct amount of payments already made as per last running account bill No .....	Dated.....	
2	Forwarded to the Accounts Office on .....	(B)	
3	Payments now to be made { (A) - (B)}	(C)	
4	Deduct amounts recoverable from the contractor on account of :	Rs	P
a	Material suplied by BHEL vide annexure A attached		
b	Hire of Tools & Plants vide Annexure B attached		
c	Other charges vide Annexure C attached		
d	Income Tax		
	Total deduction		
5	Balance		
6	Refund of 50% of security deposite on completion of work		
7	Net amount to be paid to the Contractor		

**III. CERTIFICATE OF THE ENGINEER IN CHARGE**

The measurement on which the entries in coulmns 7 to 12 of Part I of this bill (Account of work executed) are based were made by

.....  
1 (Name and designation)  
2 A statement showing the quantities of stores issued to the contractor (whether free or on recovery basis) and their disposal is attached.

Date:

Signature of Engineer in charge  
Designation

**IV CERTIFICATE OF THE SENIOR ENGINEER**

1 Certified that I have personally inspected the work and that the work has been physically completed on the due date in accordance with the terms and  
Certified that the measurements have been checked measured to the prescribed extent by .....  
..... (Name & designation). And by the undersigned at site and relevant entries have been initiated in the measurement book (vide  
2 pages.....)

3 Certified that the methods of measurement are correct

4 Certified that the measurements have been technically checked with reference to contract drawings, deviations etc

5 Certified that all the measurements recorded in the measurement book have been correctly billed for at the contract rates or approved rates.

6 Certified that all the recoverable amounts in respect of stores, tools and plant, water, electricity charges etc, have been correctly made vide Annexures A

7 Certified that the issues of all stores as per statement attached (whether charged to the contractor or direct to the work) have been technically checked and

Certified for payment of \* Rs ..... (Rupees.....) (Only). To be paid in  
cash/by cheque in the presence of .....

**ALLOCATION**

The expenditure as under and to be included in the accounts for ..... 19

Ledger Head	Debit		Credit	
	(Gross Amount)		(Deduction)	
	Rs.	P	Rs.	P
.....	.....	.....	.....	.....
Total	.....	.....	.....	.....

\* Here specify the net amount payable

Signature of Senior Engineer  
Date

**V. ENTRIES TO BE MADE IN THE ACCOUNTS OFFICE**

		ALLOCATION		
Account Bill no.....	Dated .....	Estimate No:	Code No	
Entered in Journal book vide entry No.....	Dated.....	Name of the Work .....		
Passed for.....	Rs.....	Ledger Head	Debit	Credit
Less Deductions.....	Rs.....		(Gross Amount)	(Deduction)
(Rupees.....	Only)		Rs	Rs
Payable to Shri/M/s.....	by cheque/cash		P	
Entered in contractors' Ledger no.....	Page			
Assistant	Accountant	Total	.....	.....
Date:	Date:			

VI. Received Rs.....(Rupees.....Only) in full and final settlement of all moneys due under this contract and I / we have no further claims of this contract.

Signature of Witness  
 Address

Revenue Stamp  
 Signature of Contractor  
 Date:

**VII . ENTRIES TO BE MADE BY TREASURY SECTION**

<b>Cash book entry no and date :</b>	<b>Amount Paid</b> <b>Rs.....</b>
	<b>Amount unpaid</b> <b>Rs.....</b>
	<b>Total</b> <b>Rs.....</b>

**Signature of Cashier**  
**Date:**

## ANNEXURE A

## Part I

Statement showing details of material issued to the contractor Shri/M/s..... In respect of Contract  
Agreement/Work Order No..... Dated .....

SI No	Issue voucher description					Whether recoverable		If recoverable from contractor				Remarks	
	Stores	No and date	of material	Quantity	actually	from the	Rate at	Amount	recoverable	Balance			
	Issue	allotted by	issued to	incorporated	or supplied	contractor	which	Recoverable	upto	Now			
voucher No	stores to the	the	Quantity	issued	in the work	free	Rs	P	Rs	P	Rs	previous bill	recovered
and date	SIV	contractor	issued	in the work	free	Rs	P	Rs	P	Rs	P	recovered	Rs P
1	2	3	4	5	6	7	8	9	10	11		12	

Total ..... 100

Signature of Contractor  
Date

Signature of Engineer in charge  
Date

Signature of Senior Engineer  
Date

ANNEXURE A

Part II

Statement showing details of material issued to the contractor Shri/M/s..... in respect of Contract  
 Agreement/Work Order No..... Dated ..... and not covered by the agreement

SI No	Stores Issue voucher No and date	Issue No and date allotted by stores to the	description of material issued to the contractor	Quantity issued	Quantity actually incorporated in the work	Issue Rate	Amount recoverable		Amount recoverable		Remarks
							Recoverabl e	upto Rs P	previous bill Rs P	Balance Now recovered Rs P	
1	2	3	4	5	6	7	8	9	10	11	

Total .....  
 Add Departmental Charges .....  
 Add Sales Tax (wherever applicable) .....  
 Total .....

Signature of Contractor  
 Date

Signature of Engineer in charge  
 Date

Signature of Senior Engineer  
 Date

ANNEXURE B

Statement showing TOOLS & PLANTS issued to the contractor Shri/M/s..... in respect of Contract  
Agreement/Work Order No..... Dated ..... and not covered by the agreement

SI No 1	Description of tools & plants issued 2	Period for which issued 3	Rate at which Recovery is to be made 4	Amount recoverable 5		Amount recoverable upto previous bill Rs P 6	Balance Now recovered Rs P 7	Remarks 8
				Rs	P			

Total .....  
.....

Signature of Contractor  
Date

Signature of Engineer in charge  
Date

Signature of Senior Engineer  
Date

ANNEXURE C

showing detail of other recoveries to be made from the contractor Shri/M/s.....  
 nent/Work Order No.....Dated.....

Sr.No	Particulars	Unit	Quantity	Rate Rs. P.	Amount recoverable Rs. P	Amount recovered upto previous bill Rs. P.	Amount now recovered Rs. P.	Remarks
1	2	3	4	5	6	7	8	9
1	Water Charges							
2	Electricity Charges							
3	Seignorage Charges							
4	Medical Charges							
	Cost of empty gunny bags and empty containers not 5 returned							
6								
7								
8								
9								
10								
<hr/> Total <hr/>								
Signature of Contractor			Signature of Engineer Incharge			Signature of Sr. Engineer		
Date			Date			Date		

**ANNEXURE D -**  
**DEVIATION STATEMENT**

Name of the Contractor :

Contract Agreement/Work Order No. :

Name of the Work :

Date :

Sl. No.	Descrip- tion of item	Unit	Quantity	Quantity	Rate	Rate	Amount	Amount	Difference		Reason for the deviation with autho- rity, if any
			as per agree- ment	as executed	as per agree- ment	as execu- ted	as per agree- ment	as executed	Excess	Savings	
1	2	3	4	5	6	7	8	9	10	11	12

Signature of Engineer in Charge  
 Date :

Signature of Senior Engineer  
 Date :

ANNEXURE E

Statement showing the consumption of materials issued to the contractor Shri/M/s.....  
 in respect of Contract Agreement/Work Order No..... Dated.....

Name of the Work :

**ON RECOVERY BASIS**

Sl. No.	Description of material	Unit	Quantity actually issued	Quantity actually incorpo- rated in the work	Balance	Particulars of disposal of balance	Quantity to be issued as per approved data for work actually done	Variation in consumption (Difference between column 5 and 8)	Rate charge- able for excess/ short con- sum- ption, if any		Amount recover- able for excess/ short con- sum- ption, including materials not returned	R E M A R K S
									More	Less		
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Cement											
2.	Bricks											
3.	Wood.....											
4.	Asbestos Sheet											
5.	Iron Materials											
6.												
7.												
8.												
9.												
10.												

Signature of Contractor

Date :

Signature of Engineer in Charge

Date :

Signature of Senior Engineer

Date :

Note : 1. The quantities shown in columns 4 and 5 above should tally with those shown in columns 5 and 6 respectively of Annexure A (Part I and II).

2. Data statement of theoretical consumption should be attached in support of quantity specified in column 8.

## **ANNEXURE F**

Statement showing detail of materials issued to the contractor Shri/M/s.....  
ct of Contract Agreement/Work Order No..... Dated.....



<b>QUESTIONNAIRE TO BE ANSWERED BY ENGINEER IN CHARGE AND SENIOR ENGINEER</b> (Correct particulars and answers to be recorded)	
Whether materials issued to the contractor in excess of the theoretical requirements have been returned to the Stores Department and the no. and date of such returned stores vouchers have been shown in stores statement? If not, whether the cost of such excess material has been recovered at the prescribed rate? Whether consumption statements in respect of materials chargeable to the work have been attached to the bill?	
Whether consumption of materials shown has been technically checked by Senior Engineer?	
Whether materials issued and used in the work is not less than that required for consumption in work according to our specification? If consumption is less, whether necessary recovery has been made in the bill?	
Whether measurements have been checked by the Engineer and Sr. Engineer to the extent required and certificates of check recorded in the measurements books?	
Whether contractor has signed the bill and the measurements books without reservations? If not; whether reasons have been intimated to the Accounts Department?	
Whether arithmetical calculations have been checked and certificate recorded in the measurement books by a person other than the one who calculated initially	
Whether any work was done at the risk and cost of the contractor and whether such cost has been recovered from him? Give particulars.	
Whether all advance payments on running Accounts have been recovered?	
Whether all the recoveries due to services given to the contractor like rent of accommodation, water charges, electricity charges etc. have been recovered and whether payments made by the company on behalf of the contractor have been adjusted?	
Whether the files containing abstracts from measurements books/ standard measurement books have been completed/ updated?	
Whether hire charges of tools and plant have been recovered and the statement of hire charges with full details attached?	

<b>QUESTIONNAIRE TO BE ANSWERED BY ENGINEER IN CHARGE AND SENIOR ENGINEER</b> (Correct particulars and answers to be recorded)	
Whether the certificate of workmanship and completion of work according to specifications, drawings etc. is recorded by Engineer/Sr. Engineer and whether recoveries have been made for defective works, if any?	
Whether all corrections in the bill/measurement books etc. have been neatly made and attested and there are no overwriting?	
Whether final measurements have been taken as soon as possible after completion of work and the certificate of completion issued? If not, whether reasons for delay have been recorded and communicated to Accounts?	
In respect of Quantities reduced in the final bill as compared to the running payment, whether adequate reasons have been recorded and communicated to Accounts	
Whether the Expenditure has been classified correctly according to heads of Account recorded in the sanctioned estimate?	
Whether the work has been completed within the estimated cost? If not, what is the percentage of excess over the sanctioned estimate/ administrative approval? In case the excess is beyond the competency of Sr. Engineer, what action has been taken for the obtaining the approval of the authority competent to sanction the excess?	
(a) If the contractor has furnished bank guarantee in lieu of cash security deposit towards proper execution of works and guarantee against defects during the maintenance period, whether the period of currency of the bank guarantee covers the entire maintenance period? (b) If not, whether security deposit has been proposed to be recovered from the final bill?	
Whether all the previous audit objections raised on running Account bills have been settled? If so, cite reference.	
Signature of Engineer in Charge	Signature of Engineer in Charge
Date:	Date:

 PS-	MONTHLY PLAN & REVIEW WITH CONTRACTOR		Page 1 of 6
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Name of Project		Contract No.	
Name of Work		Name of Contractor	

**PART- A: PLAN/ REVIEW OF WORK FOR THE MONTH OF ..... Date of Plan/ Review.....**

SN.	Description of Work	Unit of Measur- ement	Unit Rate	Planned		Cumulative Shortfall attributable to contractor upto last month (Refer Note 1)	Achieved	Shortfall attributable to BHEL w.r.t Plan (as per Col. 3 of Part- D)		Cumulative Shortfall attributable to Contractor upto & including this month	REMARKS (Reasons for Shortfall attributable to Contractor. Supporting documents to be kept as record.)	
				(QTY Planned for the month as per Part -C of last month)				A		B		
(a)	(b)	(c)	(d)	Phy.	Financial	Phy	Financial	Phy.	Financial	Phy.	Financial	E=A+B-C-D
	Value of Other Items not mentioned above but planned to be executed in this month											
Total				$\Sigma A$		$\Sigma B$		$\Sigma C$		$\Sigma D$		$\Sigma E$

BHEL  
(Sign with name, designation and date)

CONTRACTOR  
(Sign with name, designation and date)

 PS-	MONTHLY PLAN & REVIEW WITH CONTRACTOR	Page 2 of 6
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Name of Project		Contract No.	
Name of Work		Name of Contractor	

**PART- A: Contd.....**

Note 1: **In addition to the work planned as per Col. 'A', Contractor shall also make full efforts to minimize the 'Cumulative shortfall attributable to contractor upto the month as mentioned in Col. 'B' by enhancing its resources, so as to achieve the completion of activities as per agreed schedule. In case contractor is not able to execute the entire shortfall, then BHEL 'Engineer in-charge', shall decide the priority of work to be executed and it shall be binding on the contractor.**

Note 2: Percentage Shortfall attributable to contractor w.r.t. "Plan - Shortfall attributable to BHEL" for the month =  $[(\Sigma E - \Sigma B) / (\Sigma A - \Sigma D)] \times 100$   
In case,  $(\Sigma E - \Sigma B)$  is negative, then it shall be treated as zero percent."

Note 3: Form 14 should include all items being planned in the current month, and all items against which shortfall was attributable to contractor till previous month. However, for practical reason, if it is not possible to mention some of the items in Form-14 being planned to be executed in this month, then also value of such items shall necessarily be included in calculation of Total Value.

Note 4: In case reason for shortfall attributable to contractor is w.r.t. T&P and Manpower, it should be in conformity with Part B1 and B2.

**BHEL**  
(Sign with name, designation and date)

**CONTRACTOR**  
(Sign with name, designation and date)

 PS-	MONTHLY PLAN & REVIEW WITH CONTRACTOR		Page 3 of 6
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Name of Project		Contract No.	
Name of Work		Name of Contractor	

**PART – B-1: PLAN/REVIEW OF DEPLOYMENT OF MAJOR T&Ps FOR THE MONTH OF ..... Date of Plan/ Review.....**

**CONTRACTOR'S SCOPE: -**

SN.	PLAN				DEPLOYMENT STATUS			
	Major T&P to be deployed as per work planned for the month	QTY	Deployment Period (in days)	Weightage assigned to planned T&P (in fraction such that $\Sigma C =1$ )	Actual Deployed Quantity	Actual Deployment Period (in days)	Weighted T&P Deployed	REMARKS (Works affected due to non-deployment of T&Ps)
	A	B	C	D	E	$F=(C \times D \times E) / (A \times B)$		

Note: In case, E>B, it shall be considered as E=B. Similarly, in case D>A, it shall be considered as D=A.

Percentage of T&P Deployed =  $\Sigma F \times 100$

**BHEL SCOPE: -**

SN.	PLAN			DEPLOYMENT STATUS		
	Major T&P to be deployed as per work planned for the month	QTY	Deployment Period (in days)	Actual Deployed Quantity	Actual Deployment Period (in days)	REMARKS (Works affected due to non-deployment of T&Ps)

**BHEL**  
(Sign with name, designation and date)

**CONTRACTOR**  
(Sign with name, designation and date)

 PS-	MONTHLY PLAN & REVIEW WITH CONTRACTOR		Page 4 of 6
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Name of Project		Contract No.	
Name of Work		Name of Contractor	

**PART – B-2: PLAN/ REVIEW OF DEPLOYMENT OF MANPOWER FOR THE MONTH OF .....**

Date of Plan/ Review.....

**CONTRACTOR'S SCOPE: -**

SN.	Area of Work	Category of Labour	No. of Labour required as per category	Deployment Period (in days)	No. of Labour actually deployed	Actual Deployment Period (in days)	REMARKS (Works affected due to non-availability of labour)
			A	B	C	D	

Percentage of Manpower Deployed=100 x  $\Sigma(CxD)/\Sigma(AB)$

**BHEL**  
 (Sign with name, designation and date)

**CONTRACTOR**  
 (Sign with name, designation and date)

 PS-	MONTHLY PLAN & REVIEW WITH CONTRACTOR		Page 5 of 6
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Name of Project		Contract No.	
Name of Work		Name of Contractor	

**PART – C: PLAN(PHYSICAL) FOR THE NEXT MONTH i.e. ....** Date of Plan .....

SN.	Description of work	Original Planned Quantity	Planned Quantity (excluding shortfalls attributable to contractor till date)	Unit of Measurement	T&Ps Required		Manpower Required		REMARKS (Reasons for difference in Original Planned Quantity w.r.t. Planned quantity to be given)	
					Contractor Scope		BHEL Scope		Category of Labour	No. of Labour required as per Category
					Major T&P to be deployed as per work planned for the month	Quantity	Major T&P to be deployed as per work planned for the month	Quantity		

Note 1: Planned quantity should be based on available/ expected fronts/ inputs in the next month

Note 2: "Original Planned Quantity" shall be as per latest jointly agreed programme between BHEL and Contractor before commencement of work or at the time of latest Time Extension, as the case may be.

**BHEL**  
 (Sign with name, designation and date)

**CONTRACTOR**  
 (Sign with name, designation and date)

 PS-	MONTHLY PLAN & REVIEW WITH CONTRACTOR	Page 6 of 6
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Name of Project		Contract No.	
Name of Work		Name of Contractor	

**PART - D: REASONS FOR SHORTFALL ATTRIBUTABLE TO BHEL IN RESPECT OF PLAN FOR THE MONTH.....**

SN.	Description of Work (from Part-A)	Quantities Affected		Reasons for Shortfall attributable to BHEL	Agency responsible for reasons for Shortfall	Remarks (Supporting Documents in respect of agency responsible)
		(Physical Quantity)	Unit of Measu- rement			
1	2	3	4	5	6	7

Note1: Reasons for shortfall shall include non-availability of fronts/ drawings/ materials/ T&P (BHEL Scope)/ clearances etc. and other hindrances for which contractor is not responsible.

Note2: Agency responsible may be BHEL Site/ MUs/ Design Centre/ BHEL Customer/ other Contractors etc.

BHEL  
 (Sign with name, designation and date)

## BANK GUARANTEE FOR PERFORMANCE SECURITY

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its Unit at Bharat Heavy Electricals Limited, Power Sector Eastern Region, BHEL Bhawan, Plot No 9/1, DJ Block, Sector-II, Salt lake City, Kolkata – 700091 having awarded to Name of the Vendor / Contractor / Supplier having its registered office at \_\_\_\_\_<sup>1</sup> hereinafter referred to as the 'Contractor/Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated .....<sup>2</sup> valued at Rs.....<sup>2</sup> ( Rupees -----)for <Nature of Work<sup>3</sup> (hereinafter called the 'Contract') and the Contractor having agreed to provide a Contract Performance Guarantee, equivalent to .....% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we, ..... (hereinafter referred to as the Bank), having registered/Head office at ..... and inter alia a branch at ..... being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount Rs ----- ( Rupees -----)<sup>4</sup> without any demur, immediately on a demand from the Employer, . Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the contractors/supplier shall have no claim against us for making such payment.

We the .....bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We ..... BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractor/Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Contractor/Supplier and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor/Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor/Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

This Guarantee shall remain in force upto and including.....<sup>5</sup> and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the .....<sup>6</sup> (3 months more than the present date of validity of Bank Guarantee) we shall be discharged from all liabilities under this guarantee thereafter.

We, ..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....<sup>7</sup>
- b) This Guarantee shall be valid up to .....<sup>8</sup>
- c) Unless the Bank is served a written claim or demand on or before .....<sup>9</sup> (3 months more than the present date of validity of Bank Guarantee) all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, \_\_\_\_\_ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

*Any claim or dispute arising under the terms of this document shall only be enforced or settled in the courts of at Kolkata only.*

For and on behalf of  
(Name of the Bank)

Dated.....

Place of Issue.....

<sup>1</sup> NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

<sup>2</sup> DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

<sup>3</sup> PROJECT/SUPPLY DETAILS

<sup>4</sup> BG AMOUNT IN FIGURES AND WORDS

<sup>5</sup> VALIDITY DATE

<sup>6</sup> DATE OF EXPIRY OF CLAIM PERIOD

<sup>7</sup> BG AMOUNT IN FIGURES AND WORDS.

<sup>8</sup> VALIDITY DATE

<sup>9</sup> DATE OF EXPIRY OF CLAIM PERIOD

**Note:**

- 1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.
- 2. In Case of Bank Guarantees submitted by Foreign Vendors-
  - a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

- b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**
- b.1** In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
- b.2** **In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank** (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
- b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
- b.4** The BG should clearly specify that the demand or other document can be presented in electronic form.

**BANK GUARANTEE FOR SECURITY DEPOSIT CUM PERFORMANCE BANK GUARANTEE  
BOND**

B.G. NO.

Date

This deed of Guarantee made this ----- day of -----two thousand ---- by <Name and Address of Bank> hereinafter called the "The Guarantor" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns) in favour of M/s Bharat Heavy Electrical Limited ( A Govt. of India Undertaking) a company incorporated under the Companies Act, 1956, having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its unit at <Address of Power Sector Region<sup>1</sup>> hereinafter called "The Company" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns)

WHEREAS <Contractor's Name and Address> (hereinafter referred to as the Contractor) have entered into a contract arising out of Letter of Intent no. <LOI REF & Date> (hereinafter referred to as "the contract") for <Name of Work> with the company.

AND WHEREAS the contract inter-alia provides that the contractor shall furnish to the company a sum of Rs.----- (Rupees-----) towards security deposit for due and faithful performance of the contract in the form and manner specified therein.

AND WHEREAS the contractor has approached the Guarantor and in consideration of the arrangement arrived at between the contractor and the Guarantor, the Guarantor has agreed to give the Guarantee as hereinafter mentioned in favour of the company.

The Guarantor do hereby guarantee to the company the due and faithful performance, observance or discharge of the Contract by the contractor and further unconditionally and irrevocably undertake to pay to the Company without demur and merely on a demand, to the extent of Rs.----- (Rupees-----) against any claim by the company on them for any loss, damage, costs, charges and expenses caused to or suffered by the company by reasons of the contractor making any default in the performance, observance or discharge of the terms, conditions, stipulations or undertakings or any of them as contained in the contract.

The decision of the company whether any default has occurred or has been committed by the contractor in the performance, observance or discharge of any of the terms, conditions, stipulations or undertakings or any one of them as contained in the contract and / or as to the extent of loss, damage, costs, charges and expenses caused to or suffered by the company by reason of the contractor making any default in the performance, observance or discharge of any of the terms, conditions, stipulations or undertakings or any one of them shall be conclusive and binding on the Guarantor irrespective of the fact whether the contractor admits or denies the default or questions the correctness of any demand made by the company in any Court, Tribunal or Arbitration proceedings or before any other Authority.

The company shall have the fullest liberty without affecting in any way the liability of the Guarantor under this Guarantee, from time to time to vary any of the terms and conditions of the contract or extend time of performance by the contractor or to postpone for any time and from time to time any of the powers exercisable by it against the contractor and either enforce or forebear from enforcing any of the terms and conditions governing the contract or securities available to the company and the Guarantor shall not be released from its liability under these presents by any exercise by the company of the liberty with reference to the matters aforesaid or by reasons of time being given to the contractor or any other forbearance, act or commission on the part of the company or any indulgence by the company to the contractor or any other matter or thing whatsoever which under the law relating to sureties would, but for this provision have the effect of so releasing the Guarantor from its liability under this guarantee.

The Guarantor further agrees that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the contract and its claim satisfied or discharged and till the company certifies that the terms and conditions of the contract have been fully and properly carried out by the contractor and accordingly discharges this Guarantee, subject however, that the company shall have no claim under this Guarantee after ----- i.e. (3 months more than the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time, as the case may be) unless a notice of the claim under this Guarantee has been served on the Guarantor before the expiry of the said period in which case the same shall be enforceable against the Guarantor notwithstanding the fact that the same is enforced after the expiry of the said period.

## BANK GUARANTEE FOR SECURITY DEPOSIT CUM PERFORMANCE BANK GUARANTEE BOND

The Guarantor undertakes not to revoke this Guarantee during the period it is in force except with the previous consent of the Company in writing and agrees that any liquidation or winding up or insolvency or dissolution or any change in the constitution of the contractor or the Guarantor shall not discharge the Guarantor's liability hereunder.

It shall not be necessary for the company to proceed against the contractor before proceeding against the Guarantor and the Guarantee herein contained shall be enforceable against them notwithstanding any security which the Company may have obtained or obtain from the Contractor shall at the time when proceedings are taken against the Guarantor hereunder be outstanding or unrealized.

Notwithstanding anything contained herein before, our liability under the Guarantee is restricted to Rs.-----  
- (Rupees-----). Our guarantee shall remain inforce until -----, i.e. (the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time) unless a claim or demand under this guarantee is made against us on or before ----- (3 Months more than the validity date) we shall be discharged from our liabilities under this Guarantee thereafter.

Any claim or dispute arising under the terms of this documents shall only be enforced or settled in the courts of at  
<Name of place<sup>2</sup>> only.

The Guarantor hereby declares that it has power to execute this guarantee and the executant has full powers to do so on behalf of the Guarantor.

IN WITNESS whereof the ----- (Bank) has hereunto set and subscribed its hand the day, month and year first, above written.

(Name of the Bank)

Signed for and on behalf of the Bank  
(Designation of the Authorized Person Signing the Guarantee)

(Signatory No.-----)

DATED:

SEAL

=====

Notes :

1. **Address of Power Sector Regions (inviting the Tender)** is as below:
  - PSNR : Bharat Heavy Electricals Limited, Power Sector Northern Region, HRDI & PSNR Complex, Plot No 25, Sector 16-A, Noida – 201 301 (Uttar Pradesh)
  - PSER : Bharat Heavy Electricals Limited, Power Sector Eastern Region, BHEL Bhawan, Plot No 9/1, DJ Block, Sector-II, Salt lake City, Kolkata – 700 091
  - PSWR: Bharat Heavy Electricals Limited, Power Sector Western Region, Shree Mohini Complex, 345 Kingsway, Nagpur 440 001
  - PSSR: Bharat Heavy Electricals Limited, Power Sector Southern Region, 690, Anna Salai, Nandanam, Chennai 600 035
2. **Name of place (for jurisdiction of Courts)** is as below:
  - PSNR : Delhi
  - PSER : Kolkata
  - PSWR: Nagpur
  - PSSR : Chennai
3. The BG shall be executed on non-judicial stamp papers of adequate value procured in the name of the Bank in the State where the Bank is located.
4. The BG is required to be sent by the executing Bank directly to BHEL at the address where tender is submitted / accepted under sealed cover.

**BANK GUARANTEE FOR RELEASE OF AMOUNTS WITHHELD/LIQUIDATED DAMAGES AMOUNT**

Bank Guarantee No:

Date:

To

NAME

**& ADDRESSES OF THE BENEFICIARY**

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited <sup>1</sup>(hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its Unit at Bharat Heavy Electricals Limited, Power Sector Eastern Region, BHEL Bhawan, Plot No 9/1, DJ Block, Sector-II, Salt lake City, Kolkata – 700091 having awarded to (Name of the Vendor / Contractor / Supplier) incorporated under the .....having its registered office at ..... <sup>1</sup>(hereinafter referred to as the 'Contractor', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated .....<sup>2</sup>valued at Rs.....( Rupees -----) for <Nature of Work><sup>3</sup>(hereinafter called the 'Contract')

The Contractor as per Contract should have completed the work/ supplies under the contract by.....(date). As per terms and conditions of the Contract, the Employer is entitled to levy Liquidated Damages (LD) for delays and the Employer has withheld an amount of Rs .....by way of LD as per the Contract. Now, on the request of the Contractor, the Employer having agreed to release the amount of Rs.....withheld from the Contractor's invoices as Liquidated damages under the terms and conditions of the Contract on production of a Bank Guarantee for Rs.\_\_\_\_\_ (Rupees.....only)<sup>4</sup>

We, ..... (hereinafter referred to as the Bank), having registered/Head office at ..... and inter alia a branch at ..... being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount of Rs ----- ( Rupees -----) without any demur, merely on a demand from the Employer

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.\_\_\_\_\_

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the contractors/supplier shall have no claim against us for making such payment.

We the .....bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We ..... BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractor/Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Contractor/Supplier and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor/Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor/Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's/ Supplier's liabilities.

This Guarantee shall remain in force upto and including.....<sup>5</sup> and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing or before the .....<sup>6</sup> (3 months more than the present date of validity of Bank Guarantee) we shall be discharged from all liabilities under this guarantee thereafter.

We, ..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....<sup>7</sup>
- b) This Guarantee shall be valid up to .....<sup>8</sup>
- c) Unless the Bank is served a written claim or demand on or before \_\_\_\_\_<sup>9</sup> (3 months more than the present date of validity of Bank Guarantee) all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, \_\_\_\_\_ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

Any claim or dispute arising under the terms of this document shall only be enforced or settled in the courts of at Kolkata only.

For and on behalf of  
(Name of the Bank)

Dated.....

Place of Issue.....

<sup>1</sup> NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

<sup>2</sup> DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

<sup>3</sup> PROJECT/SUPPLY DETAILS

<sup>4</sup> BG AMOUNT IN FIGURES AND WORDS

<sup>5</sup> VALIDITY DATE

<sup>6</sup> DATE OF EXPIRY OF CLAIM PERIOD

<sup>7</sup> BG AMOUNT IN FIGURES AND WORDS.

<sup>8</sup> VALIDITY DATE

<sup>9</sup> DATE OF EXPIRY OF CLAIM PERIOD

**Note:**

1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.
2. In Case of Bank Guarantees submitted by Foreign Vendors-
  - a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
  - b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)
    - b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
    - b.2 In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
    - b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
    - b.4 The BG should clearly specify that the demand or other document can be presented in electronic form.

**BANK GUARANTEE FOR SUPPLY FREE ISSUE MATERIAL.**

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its Unit at Bharat Heavy Electricals Limited, Power Sector Eastern Region, BHEL Bhawan, Plot No 9/1, DJ Block, Sector-II, Salt lake City, Kolkata – 700091 having awarded to Name of the Vendor / Contractor / Supplier having its registered office at \_\_\_\_\_<sup>1</sup> (hereinafter referred to as the 'Contractor/Supplier/Fabricator' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref. No..... dated .....<sup>2</sup> valued at Rs.....( Rupees -----) for <Nature of Work<sup>3</sup> (hereinafter called the 'Contract')

and, the Employer having agreed as per the terms and conditions of the Contract to supply free issue material costing Rs.\_\_\_\_\_ for the manufacture/fabrication of the equipment at the Contractor's site on on furnishing a Bank Guarantee for Rs.\_\_\_\_\_ (Rupees.....)<sup>4</sup> in the manner hereinafter specified for the due safeguard of the free issue material,

we, ..... (hereinafter referred to as the Bank), having registered/Head office at ..... and inter alia a branch at ..... being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount of Rs ----- ( Rupees -----) without any demur, merely on a demand from the Employer, .

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Contractors/Supplier shall have no claim against us for making such payment.

We the .....Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We ..... Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractor/Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Contractor/Supplier and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor/Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor/Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor/Supplier/ Fabricator and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's/Supplier's/ Fabricator's liabilities.

This Guarantee shall remain in force upto and including.....<sup>5</sup> and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/ Supplier/ Fabricator but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the .....<sup>6</sup> (3 months more than the present date of validity of Bank Guarantee) we shall be discharged from all liabilities under this guarantee thereafter.

We, ..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....<sup>7</sup>
- b) This Guarantee shall be valid up to .....<sup>8</sup>
- c) Unless the Bank is served a written claim or demand on or before .....<sup>9</sup> (3 months more than the present date of validity of Bank Guarantee) all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, ..... Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

Any claim or dispute arising under the terms of this document shall only be enforced or settled in the courts of at Kolkata only.

For and on behalf of  
(Name of the Bank)

Dated.....

Place of Issue.....

<sup>1</sup> NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER .

<sup>2</sup> DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

<sup>3</sup> PROJECT/SUPPLY DETAILS

<sup>4</sup> BG AMOUNT IN FIGURES AND WORDS

<sup>5</sup> VALIDITY DATE

<sup>6</sup> DATE OF EXPIRY OF CLAIM PERIOD

<sup>7</sup> BG AMOUNT IN FIGURES AND WORDS.

<sup>8</sup> VALIDITY DATE

<sup>9</sup> DATE OF EXPIRY OF CLAIM PERIOD

**Note:**

- 1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.**
- 2. In Case of Bank Guarantees submitted by Foreign Vendors-**
  - a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
  - b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**
- b.1** In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
- b.2** **In case, Foreign Vendors intend to provide BG from** Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
- b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
- b.4** The BG should clearly specify that the demand or other document can be presented in electronic form.

**PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY**  
**(On non-Judicial paper of appropriate value)**

**Bank Guarantee No.....**

**Date.....**

**To**

(Employer's Name and Address)

.....

Dear Sirs,

In accordance with the terms and conditions of your Invitation for Bids/Notice Inviting Tender No.....<sup>1</sup>(Tender Conditions) M/s. .... having its registered office at .....<sup>2</sup> (hereinafter referred to as the '**Tenderer**'), is submitting its bid for the work of..... for.....<sup>3</sup>. at Bharat Heavy Electricals Limited, Power Sector Eastern Region, BHEL Bhawan, Plot No 9/1, DJ Block, Sector-II, Salt lake City, Kolkata – 700091.<sup>4</sup>(name of the Employer)

The Tender Conditions provide that the **Tenderer** shall pay a sum of Rs ..... as Earnest Money Deposit in the form therein mentioned. The form of payment of Earnest Money Deposit includes Bank Guarantee executed by a Scheduled Bank.

In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Bank Guarantee against Earnest Money Deposit for an amount of .....<sup>5</sup> ..... is required to be submitted by the Tenderer as a condition precedent for participation in the said Tender and the Tenderer having approached us for giving the said Guarantee,,

we, the .....<sup>6</sup> [Name & address of the Bank] ..... having our Head Office at .....(hereinafter referred to as the Bank) being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums of Rs. .....<sup>5</sup> .....<sup>7</sup> .....<sup>8</sup> .....<sup>9</sup> .....<sup>10</sup> .....<sup>11</sup> .....<sup>12</sup> .....<sup>13</sup> .....<sup>14</sup> .....<sup>15</sup> .....<sup>16</sup> .....<sup>17</sup> .....<sup>18</sup> .....<sup>19</sup> .....<sup>20</sup> .....<sup>21</sup> .....<sup>22</sup> .....<sup>23</sup> .....<sup>24</sup> .....<sup>25</sup> .....<sup>26</sup> .....<sup>27</sup> .....<sup>28</sup> .....<sup>29</sup> .....<sup>30</sup> .....<sup>31</sup> .....<sup>32</sup> .....<sup>33</sup> .....<sup>34</sup> .....<sup>35</sup> .....<sup>36</sup> .....<sup>37</sup> .....<sup>38</sup> .....<sup>39</sup> .....<sup>40</sup> 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conclusive and binding on us irrespective of any dispute or difference raised by the Tenderer.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer shall have no claim against us for making such payment.

We ..... Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission of bids from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tenderer or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities.

This Guarantee shall be irrevocable and shall remain in force upto and including.....<sup>6</sup> and shall be extended from time to time for such period as may be desired by the Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the .....<sup>7</sup> we shall be discharged from all liabilities under this Guarantee.

We, ..... Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....<sup>5</sup>.....
- b) This Guarantee shall be valid up to .....<sup>6</sup>
- c) Unless the Bank is served a written claim or demand on or before \_\_\_\_\_<sup>7</sup> all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank

We, \_\_\_\_\_ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of

(Name of the Bank)

Date.....

Place of Issue.....

<sup>1</sup> *Details of the Invitation to Bid/Notice Inviting Tender*

<sup>2</sup> *Name and Address of the Tenderer*

<sup>3</sup> *Details of the Work*

<sup>4</sup> *Name and Address of BHEL Unit/Division/Region (Already filled up)*

<sup>5</sup> *BG Amount in words and Figures*

<sup>6</sup> *Validity Date*

<sup>7</sup> *Date of Expiry of Claim Period*

**Note:**

1. Units are advised that expiry of claim period may be kept 2/3 months after validity date. As per Works Policy, the Bank Guarantee shall be valid for at least six months.
2. In Case of Bank Guarantees submitted by Foreign Vendors-

- a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
- b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**
  - b.1** In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
  - b.2** **In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable.** However, the procedure at **sl.no. b.1** will required to be followed.
  - b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
  - b.4** The BG should clearly specify that the demand or other document can be presented in electronic form.

Form for getting payment through RTGS (Real Time Gross Settlement)

01. Name of Vendor	BHARAT HEAVY ELECTRICALS LTD.
02. Address	<del>DEPT</del> BHEL HOUSE, SIRI FORT, N.DELHI
03. Vendors Bank A/c Name	BHARAT HEAVY ELECTRICALS LTD.
04. Vendors Bank A/c No.	111D7800029
05. Name of Bank	STATE BANK OF INDIA
06. Name of Branch	COMMERCIAL BR., SALT LAKE, SECTOR-V KOLKATA
07. Branch Phone No.	033-23575665
08. City	KOLKATA
09. IFSC Code of the Branch	SBIN 0004289

*The charges if any for payment through RTGS may be recovered from the Bill submitted by us.*

Signature of Authorized  
Representative के. के. कोआरी/K. K. Coari  
उप महाप्रबंधक (वित्त) Dy. General Manager (Fin)  
बी. प्य. इ. प्ल. : पी.एस.डि.आर: कोलकाता-700 091  
BHEL:PSER /Kolkata-700 091

Confirmation by Banker  
with office seal

*Note : Incorrect information will create Accounting complications and payment will be delayed*

**VOLUME-III**  
**PRICE SCHEDULE, REV-0**

Receipt, Unloading, Storage, Dismantling, New Material Erection, Re-Erection of Old Items, Modification of existing Items, Restoration, Commissioning, Testing & PG Test of Combustion Modification System for NOx Mitigation of of U#5,6 & 7, STG-II (3X500MW) at NTPC - KAHALGAON STPS, Bihar

**TENDER NO PSER:SCT:KGN-S2009:19**

**PREAMBLE**

SL NO	DESCRIPTION
1	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully before filling in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender and other tender sections as applicable and shall have precedence over any contrary statement mentioned anywhere in this document.
2	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions. Drawings enclosed with the tender are only preliminary and for guidance/tender purposes giving some idea of the work involved. The work is to be executed as per terms & conditions of the tender and actual drawings/documents, which shall be furnished during execution.
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the complete tender document and this schedule.
5	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within plus minus fifteen percent ( $\pm 15\%$ ) of the awarded price as per LOI.
6	Prior written approval of BHEL shall be sought by the contractor in case quantity variation of any item crosses +50% (plus fifty percent) limit during execution and approval to be obtained before execution of further quantity for this item.
7	In case Sealed /Paper Price Bids are opened for finalisation of the tender, for any Item Rate/BOQ based service contract, possibility of variation of quantity/ addition/deletion of items can not be ruled out. Under such circumstances, after execution of work, if it is observed that standing as L-1 is changed based on actual quantity executed, the bidder shall give suitable rebate to maintain your standing as L-1. Since this aspect can be assessed at the end of execution, necessary adjustment will be effected at the end of execution in final bill. This condition shall not be applicable where the tender is finalised through Reverse Auction.
8	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and/ or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order. The rates of unit rate/optional items shall remain valid till execution of the order, if the job/work is awarded to the bidder.
9	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing , clearing of old structures and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same. However, if separate rate for such item is available in the rate schedule, the same shall be considered.
10	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.
11	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up.
12	The tenderer shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to the done within the time schedule attached and to have acquainted himself of the conditions prevailing at site before submission of his bid/offer. No claim whatsoever due to lack of knowledge of site conditions shall be entertained after award of the work.
13	No splitting of the job is envisaged unless the same is specifically indicated in the TCC/Vol-1F. Decision of BHEL in this regard shall be final and binding to the bidders.
14	Bidders are not allowed to alter the Price Schedule format including item description, quantity etc. and the offer is liable for rejection if the bidders submit their prices in Price Schedules modified by them. BHEL reserves the right to reject the offers of bidders who submit offers in Price Formats which are modified/ altered by them. Also putting any comments instead of rates/price in the designated column of the rate schedule shall make the offer liable for rejection.
15	Bidders to note that for Civil &/Structural packages, against a particular item against a ST No. appearing in more than one schedule of the BOQ, same rate must be quoted in all schedules for that particular items with same descriptions. If by error, different rates are quoted in different schedules for same ST No. (i.e. item with same description), then the higher of the rates shall be considered for evaluation but awarding shall be done with the lower rate, if the bidder becomes L-1. The same modality shall be applicable for other item rate service contracts where item with same description is repeated in different schedules.
16	For Lumpsum Service Contract : The items/components indicated in the tender is indicative and may vary to any extent. No compensation shall be payable in case of any variation in the items/components listed in the bill of quantities if the executed weight remains within the variation limit.
17	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.
18	In case of tender for Civil and/or Structural works, if the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of CPWD/PWD/DSR schedule as prescribed in the tender/BOQ cum Rate Schedule. PVC/escalation is not payable for these Non-scheduled items.
19	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor. No idling charge whatsoever (either for labour or any other resources ) is payable by BHEL for any reason whatsoever.

**VOLUME-III**  
**PRICE SCHEDULE, REV-0**

**Receipt, Unloading, Storage, Dismantling, New Material Erection, Re-Erection of Old Items, Modification of existing Items, Restoration, Commissioning, Testing & PG Test of Combustion Modification System for NOx Mitigation of of U#5,6 & 7, STG-II (3X500MW) at NTPC - KAHALGAON STPS, Bihar**

**TENDER NO PSER:SCT:KGN-S2009:19**

**PREAMBLE**

SL NO	DESCRIPTION
20	Size and weights of various items are mentioned in the attached BOQ cum rate/price schedule for reference purpose only & these shall not be taken into consideration for quoting/calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender. Bidders shall quote for each item in the rate column, taking unit as mentioned in the quantity column. Rates shall be filled in both figures and words. Amount shall be calculated based upon these rates multiplied by the mentioned quantity for the respective items.
21	Bidder's Total price shall be considered for evaluation unless stated otherwise.
22	In case of BOP packages, if Bidder does not quote/indicate the price for freight charges against indicated rate schedule, the same shall be considered as 2% of basic price and adjusted with the total quoted price against each item keeping the total quoted price unaltered.

**VOLUME-III**  
**PRICE SCHEDULE, REV-0**

Receipt, Unloading, Storage, Dismantling, New Material Erection, Re-Erection of Old Items, Modification of existing Items, Restoration, Commissioning, Testing & PG Test of Combustion Modification System for NOx Mitigation of of U#5,6 & 7, STG-II (3X500MW) at NTPC -KAHALGAON STPS, Bihar

**TENDER NO PSER:PSER:SCT:KGN-S2009:19**

**SCH-1 - TOTAL PRICE**

SL. NO.	DESCRIPTION OF EQUIPMENT/ ITEM	PRICE SCHEDULE REF	TOTAL PRICE FOR THREE (03) UNITS OF BOILER (Rs)
1.0	Total price for Receipt, Unloading, Stoarage of materials, Dismantling (certain areas as per site requirement/scope of work) & Upkeepment of materials for re-use/re-erection/modification of Mechanical, Electrical & C&I system, supply & application of paints, handling/transportation of equipments / materials from storage yard , pre-assembly, erection, testing, commissioning of new materilas, re-erection/re-use/modification/commissioning of old dismantled items ,handing over & PG Test of total Mechanical, Electrical and C&I system for Combustion modification system for Nox mitigation at U#5,6 & 7 at NTPC - KAHALGAON (3x500 MW), Stage-II as enumerated in detail in the tender document.	SCH 2 - BREAK UP OF TOTAL PRICE	

**NOTE:-**

- i. Bidder's quoted total price at Sl. No 1 above, respectively shall be apportioned into amount of various items of works based on allocated percentages against respective item, in respective schedules / parts (SCH-2). As such, bidder shall not indicate / quote any amount / rate in these schedules / parts and any amount / rate quoted against any item shall not be taken into cognizance / account and offer may be liable for rejection.
- ii. Based on the itemwise percentage allocations at SCH-2, the amount for the individual items of the Bill of Quantity shall be arrived at. The rates of individual items shall be derived from the amount against each items and its quantity after rounding off to upto 3 decimal places. However, RA bill payment shall be done after rounding off the gross amount to two decimal points. Any adjustment, if required, due to such methodology, will be effected / adjusted in final bill.
- iii. Any item as per scope of work, if not included in the price quoted above and shown separately will not be taken cognizance of and the offer shall be liable for rejection.
- iv. Price format shall not be changed by bidder in any case and it may lead to cancellation of their offer.

**VOLUME-III**  
**PRICE SCHEDULE, REV-0**

Receipt, Unloading, Storage, Dismantling, New Material Erection, Re-Erection of Old Items, Modification of existing Items, Restoration, Commissioning, Testing & PG Test of Combustion Modification System for NOx Mitigation of of U#5,6 & 7, STG-II (3X500MW) at NTPC -KAHALGAON STPS, Bihar

**TENDER NO PSER:SCT:KGN-S2009:19**

**SCH-2 - BREAK UP OF GRAND TOTAL PRICE**

SL. NO.	DESCRIPTION OF EQUIPMENT/ ITEM	Quantity For Three Units	Weightage for Total price of each item total
A	<p>Dismantling of Boiler items as per scope of work &amp; Re-Erection/re-use/modification, alignment, welding &amp; commissioning of old dismantled items (refer annexure-I of TCC)</p> <p>a.1 Approx weight to be dismantled: 50 MT/Unit x 3=150 MT</p> <p>a.2 Approx weight of Old dismantled Items to be retained/re-erected, rectified, aligned, welded, commissioned is 30 MTX3=90 MT as per Annex-I of TCC.</p> <p><b>Note: Quantity for Dismantling work &amp; old dismantled items to be re-erected/re-used/modified, commissioned may vary to any extent. No extra payment shall be made for quantity variation for a.1 &amp; a.2 mentioned above.</b></p>	1 lot	0.106164820
B	<p>Erection of new items:</p> <p>Approx weight of new items to be erected, aligned, commissioned including Erection &amp; arrangement of Scaffolding for Boiler: 201 MT (Pr Parts:14+Insulation:42+Non Pr Parts:145)/Unit x3= 603 MT ,(Refer annex-II of TCC)</p> <p><b>Note: Erection &amp; arrangement of scaffolding in required areas excluding 1 st pass Boiler Furnace Inside(refer E&amp;F of this schedule). Payment shall be made on pro rata basis as per actual quantity.</b></p>	603 MT	0.484491670
C	<p>C&amp;I &amp; Electrical work (refer Annex-III of TCC for BOQ)</p> <p><b>Note: Quantity &amp; Size of C&amp;I &amp; Electrical Works/Items may vary to any extent. No extra payment shall be made for quantity/size variation.</b></p>	1 Lot	0.082399980
D.1	Material Handling work for 210 MT/UnitX3=630 MT (refer Annex-IV of TCC). Payment shall be made on pro rata basis as per actual quantity.	630 MT	0.048551270
D.2	Approx weight of existing/old materials shifting/re stacking inside cover store/semi covered store/material yard is 10 MT for three units (refer Annex IV of TCC). Payment shall be made on pro rata basis as per actual quantity.	10 MT	0.000274190
E	<p>Erection of cup lock Scaffolding along with Steel Planks, Staircase, handrails etc. for <b>1 st Pass Inside Boiler Furnace</b>:</p> <p>a) Scaffolding Materials receipt &amp; transportation/shifting from NTPC store to site.</p> <p>b) Erection of Scaffolding.</p> <p>c) Dismantling of Scaffolding on completion of work.</p> <p>d) Return of Scaffolding material to customer store.</p> <p>e) This scaffolding work to be carried out during shutdown period, however material shifting to be carried out during pre-shutdown period.</p> <p><b>Note: sl. no.E may not be executed in case the same is carried out by customer during execution, in that case payment shall not be made against sl no E.</b></p>	1 lot	0.087727300
F	<p>Arrangement of cup lock Scaffolding materials along with Steel Planks, Staircase, hand rails etc. for <b>1 st pass inside Boiler Furnace</b></p> <p>a) For making Scaffolding upto 55 Mtr Elevation inside Boiler furnace 1 st pass.</p> <p>b) Approximate dimension of furnace inside is 19.939 Mtrs X 16.559 Mtrs</p> <p>c) Requirement of these scaffolding will be during shutdown period, however all materials to be made available at site before commencement of shutdown.</p> <p><b>Note: sl. no.F may not be executed in case the same is arranged by customer during execution, in that case payment shall not be made against sl no F.</b></p>	1 lot	0.190390770
<b>TOTAL PRICE</b>			1.00000000