

TENDER SPECIFICATION

NO: BHE/PW/PUR/TENDHE-TPT/1238

LOGISTICS WORK AT DJIBOUTI AND CROSS COUNTRY TRANSPORTATION OF CARGO OF 2X40 MW STG SET AT TENDAHO NEW SUGAR FACTORY , AFAR REGIONAL STATE, ETHIOPIA.

AT

TENDAHO NEW SUGAR FACTORY PROJECT

AFAR REGIONAL STATE

ETHIOPIA

VOLUME – I

CONSISTING OF:

- **Notice Inviting Tender,**
- **Volume-IA : Technical Conditions of Contract-,**
- **Volume-IB : Special conditions of Contract,**
- **Volume-IC : General conditions of Contract**
- **Volume-ID : Forms & Procedures**



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

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Tender Specification Issue Details

Tender Specification No: BHE/PW/PUR/TENDHE-TPT/1238

PORT CLEARANCE AT DJIBOUTI AND CROSS COUNTRY TRANSPORTATION OF CARGO TO TENDAHO SUGAR FACTORY OF **2X40 MW STG SET AT TENDAHO NEW SUGAR FACTORY , AFAR REGIONAL STATE, ETHIOPIA**

AT

TENDAHO NEW SUGAR FACTORY PROJECT

AFAR REGIONAL STATE

ETHIOPIA

EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

LAST DATE FOR Refer Notice Inviting Tender
TENDER SUBMISSION .

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

M/s.

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PLEASE NOTE:
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

AGM (Purchase)
Place: Nagpur
Date :

1238

NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



Ref: BHE/PW/PUR/TENDHE-TPT/1238

Date: 28/02/2014

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

To

Dear Sir/Madam

Sub : NOTICE INVITING TENDER

Sealed offers in two part bid system are invited from reputed & experienced **Ethiopian bidders** (meeting [PRE QUALIFICATION CRITERIA](#) as mentioned in Annexure-I) for the subject job by the undersigned on the behalf of BHARAT HEAVY ELECTRICALS LIMITED as per the tender document. Following points relevant to the tender may please be noted and complied with.

1.0 Salient Features of NIT

SL NO	ISSUE	DESCRIPTION
i	TENDER NUMBER	BHE/PW/PUR/TENDHE-TPT/1238
ii	Broad Scope of job	PORT CLEARANCE AT DJIBOUTI AND CROSS COUNTRY TRANSPORTATION OF CARGO TO TENDAHO SUGAR FACTORY OF 2X40 MW STG SET AT TENDAHO NEW SUGAR FACTORY , AFAR REGIONAL STATE, ETHIOPIA AT TENDAHO NEW SUGAR FACTORY PROJECT AFAR REGIONAL STATE ETHIOPIA
iii	DETAILS OF TENDER DOCUMENT	
a	Volume-IA	<i>Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc</i> Applicable
b	Volume-IB	<i>Special Conditions of Contract (SCC)</i> Applicable
c	Volume-IC	<i>General Conditions of Contract (GCC)</i> Applicable
d	Volume-ID	<i>Forms and Procedures</i> Applicable
e	Volume-II	<i>Price Schedule (Absolute value).</i> Applicable
iv	Issue of Tender Documents	<ol style="list-style-type: none"> <u>Sale from BHEL PS Regional office at :Nagpur</u> Start : 28 /02/ 2014 Closes: 07/03/2014 , Time :16.00 Hrs From BHEL website (www.bhel.com) Tender documents can however be downloaded from website till due date of submission Applicable

v	DUE DATE & TIME OF OFFER SUBMISSION	Date : 10/03/2014 , Time :15.00Hrs Place : <u>BHEL PS Regional office at :Nagpur</u>	Applicable
vi	OPENING OF TENDER	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 opening of tender	Applicable
vii	EMD AMOUNT	61600 ETHIOPIAN BIRR Ethiopian bidders can submit their EMD/Cost of documents of requisite amount at BHEL Ethiopia office at the following address: BHEL Office, No.210, 2nd Floor, Sami Bldg, Gerji Road, Bole Sub City, Addis Ababa Ethiopia	Applicable
viii	COST OF TENDER	600 ETHIOPIAN BIRR	Applicable
ix	LAST DATE FOR SEEKING CLARIFICATION	Date: Atleast 3 days before the due date of offer submission Along with soft version also, addressing to undersigned & to others as per contact address given below	Applicable
x	SCHEDULE OF Pre Bid Discussion (PBD)	Date : Not applicable.	Not applicable.
xi	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)	Not Applicable	Not Applicable
xii	Latest updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage (www.bhel.com -->Tender Notifications →View Corrigendums) <u>and not in the newspapers</u> . Bidders to keep themselves updated with all such information	

- 2.0 The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, duly signed & stamped on each page, as part of offer. **Rates/Price including discounts/rebates, if any, mentioned anywhere/in any form in the techno-commercial offer other than the Price Bid, shall not be entertained.**
- 3.0 Unless specifically stated otherwise, bidder shall remit cost of tender and courier charges if applicable, in the form of Demand Draft drawn in favour of Bharat Heavy Electricals Ltd, payable at Power Sector Regional HQ at Nagpur issuing the Tender, along with techno-commercial offer. Bidder may also choose to deposit the Tender document cost & EMD by cash at the Cash Office as stated above against sl no vii of 1, on any working day; and in such case copy of Cash receipt is to be enclosed with the Techno Commercial offer. Sale of tender Documents shall not take place on National Holidays, holidays declared by Central or State Governments and BHEL PS HQ at Nagpur, Sundays and second/ last Saturdays

- 4.0 Unless specifically stated otherwise, bidder shall deposit EMD through Demand Draft/Pay Order in favour of Bharat Heavy Electricals Ltd, payable at Nagpur. For other details and for 'One Time EMD' please refer General Conditions of Contract. Bidder may opt to submit EMD by cash at the Cash Office as stated above against sl no vii of 1, on any working day; and in such case copy of Cash receipt is to be enclosed with the Techno Commercial offer
- 5.0 **Procedure for Submission of Tenders:** The Tenderers must submit their Tenders to Officer inviting Tender, as detailed below:
- PART-I consisting of 'PART-I A (Techno Commercial Bid)' & 'PART-I B (EMD/COST of TENDER)' in two separate sealed and superscribed envelopes (ENVELOPE-I & ENVELOPE-II)
 - PART-II (Price Bid) – in sealed and superscribed envelope (ENVELOPE-III)
 - One set of tender documents shall be retained by the bidder for their reference
- 6.0 The contents for ENVELOPES and the superscription for each sealed cover/Envelope are as given below. **(All pages to be signed and stamped)**

Sl no	Description	Remarks
	Part-I A	
	ENVELOPE – I superscribed as : PART-I (TECHNO COMMERCIAL BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION: CONTAINING THE FOLLOWING:-	
i.	Covering letter/Offer forwarding letter of Tenderer.	
ii.	Duly filled-in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above. Note: a. In case of any deviation, the same should be submitted separately for technical & commercial parts, indicating respective clauses of tender against which deviation is taken by bidder. The list of such deviation shall be placed after document under sl no (i) above. It shall be specifically noted that deviation recorded elsewhere shall not be entertained. 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/ annexure/ schedules/ drawing etc as required in line with Pre-Qualification criteria. It shall be specifically noted that all documents as per above shall be indexed properly and credential certificates issued by clients shall distinctly bear the name of organization, contact ph no, FAX no, etc.	
iv.	All Amendments/Correspondences/Corrigenda/Clarifications/Changes/ Errata etc pertinent to this NIT.	
v.	Integrity Pact Agreement (Duly signed by the authorized signatory)	If applicable
vi.	Duly filled-in annexures, formats etc as required under this Tender Specification/NIT	
vii.	Notice inviting Tender (NIT)	
viii.	Volume – I A : Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc	
ix.	Volume – I B : Special Conditions of Contract (SCC)	
x.	Volume – I C : General Conditions of Contract (GCC)	
xi.	Volume – I D : Forms & Procedures	
xii.	Volume – II (UNPRICED – without disclosing rates/price, but mentioning only 'QUOTED' or	

- 7.0 Deviation with respect to tender clauses and additional clauses/suggestions in Techno-commercial bid / Price bid shall NOT be considered by BHEL. Bidders are requested to positively comply with the same.
- 8.0 BHEL reserves the right to accept or reject any or all Offers without assigning any reasons thereof. BHEL also reserves the right to cancel the Tender wholly or partly without assigning any reason thereof. Also BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).

9.0 Assessment of Capacity of Bidders:

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

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

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

i). **Total number of Packages**

Total number of Packages in hand = P

Where

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

- II. **PERFORMANCE:** Here 'Monthly Performance' of the bidder for all the packages (under execution/ executed during the 'Period of Assessment' in all the Power Sector Regions of BHEL) SIMILAR to the packages covered under the tendered scope, excepting packages not commenced shall be taken into consideration. The 'Period of Assessment' shall be 6 months preceding the cut off month. The cut off month for reckoning 'Period of Assessment' shall be the month two (2) months preceding the month corresponding to the 'latest date of bid submission', in the following manner:

(Note: For example if 'latest date of bid submission' is in Aug 2011, then the 'performance' shall be assessed for a 6 month period upto and inclusive of June 2011, for all the unit wise identified packages (refer Table 1)

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

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

- a) $P_1, P_2, P_3, P_4, P_5, \dots, P_N$ etc be the packages (under execution/ executed during the 'Period of Assessment' in all Regions) SIMILAR to the packages covered under the tendered scope, excepting packages not commenced. Total number of similar packages for all Regions = P_T (i.e $P_T = P_1 + P_2 + P_3 + P_4 + \dots + P_N$)

- b) 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 $T_T = T_1 + T_2 + T_3 + T_4 + \dots + T_N$)

e) Sum 'S_i' of 'Monthly Performance Evaluation' Scores (S_{1,1}, S_{1,2}, S_{1,3}, S_{1,4}, S_{1,5},.... S_{1,N}) for similar package P₁, for the 'period of assessment' 'T₁' (i.e S₁ = S_{1,1}+ S_{1,2}+ S_{1,3}+ S_{1,4}+ S_{1,5}+...S_{1,N}). Similarly S₂ for package P₂ for period T₂, S₃ for package P₃ for period T₃, etc for the tendered scope for all Regions. Now calculate cumulative sum 'S_T' of 'Monthly Performance Evaluation' Scores for total similar Packages 'P_T' for all Regions (i.e 'S_T' = S₁+ S₂+ S₃+ S₄+ S₅+.... S_N.)

d) Overall Performance Rating 'R_{BHEL}' for the similar Package/Packages (under execution/ executed during the 'Period of Assessment') in all the Power Sector Regions of BHEL):

Aggregate of Performance scores for all similar packages in all the Regions

=

Aggregate of months for each of the similar package for which performance should have been evaluated in all the Regions

S_T

=

T_T

e) Bidders to note that the risk of non evaluation or non availability of the 'Monthly Performance Evaluation' reports as per relevant formats is to be borne by the Bidder

f) Table showing methodology for calculating 'a', 'b' and 'c' above

Sl no	Item Description	Details for all Regions							Total
		(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 ie Sum (Σ) of columns (iii) to (ix)
2	Number of Months for which 'Monthly Performance Evaluation' as per relevant formats should have been done in the 'period of assessment' for corresponding similar Package (as in row 1)	T ₁	T ₂	T ₃	T ₄	T ₅	...	T _N	Sum (Σ) of columns (iii) to (ix) = T _T
3	Monthly performance scores for the corresponding period (as in Row 2)	S ₁₋₁ S ₁₋₂ S ₁₋₃ S ₁₋₄ ...	S ₂₋₁ S ₂₋₂ S ₂₋₃ S ₂₋₄ ...	S ₃₋₁ S ₃₋₂ S ₃₋₃ S ₃₋₄ ...	S ₄₋₁ S ₄₋₂ S ₄₋₃ S ₄₋₄ ...	S ₅₋₁ S ₅₋₂ S ₅₋₃ S ₅₋₄	S _{N-1} S _{N-2} S _{N-3} S _{N-4} ...	
4	Sum of Monthly Performance scores of the corresponding Package for the corresponding period	S ₁	S ₂	S ₃	S ₄	S ₅	...	S _N	Sum (Σ) of columns (iii) to (ix) = S _T

(as in row 3)

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

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

- 'Period of Assessment'
- 12 months preceding the cut-off month
- 24 months preceding the cut-off month
- 36 months preceding the cut-off month

In case, R_{BHEL} cannot be calculated as above, then Bidder shall be treated as 'NEW VENDOR'. Further eligibility and qualification of this bidder shall be as per definition of 'NEW VENDOR' described in 'Explanatory Notes'

- iii) Factor "L" assigned based on Overall Performance Rating (R_{BHEL}) at Power Sector Regions.:

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

III. 'Assessment of Capacity of Bidder':

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

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

Note:

- 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
- For $R_{BHEL} = 60$, $P_{Max} = '1'$
- 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 9.1)

IV. Explanatory note:

- Similar package means Boiler or ESP or Piping or Turbine or Civil or Structure or Electrical or CI, etc at the individual level irrespective of rating of Plant, and irrespective of whether the subject tender is a single package or as part of combined/composite packages. Normally Boiler, ESP, Piping, Turbine, Electrical, CI, Civil, Structure, etc is considered individual level of package. For

example in case the tendered scope is a Boiler Vertical Package comprising of Boiler, ESP and Power Cycle Piping (i.e the 'identified packages as per Table 1 below), the 'PERFORMANCE' part against sl no II above, needs to be evaluated considering all the identified packages (ie Boiler, ESP and Power Cycle Piping) and finally the Bidder's capacity to execute the tendered scope is assessed in line with III above

b) Identified Packages (Unit wise)

Table-1

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

e) Bidders who have not been evaluated for at least six package months in the last 36 months in the online BHEL system for contractor performance evaluation in BHEL PS Regions, wof July 2010 shall be considered "NEW VENDOR".

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

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

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

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

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

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

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

i. up to Boiler Steam Blowing in case of Steam Generator and Auxiliaries

~~ii. upto Synchronisation in case of all other works excepting sl no (i) and (iii)~~

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

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

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

- 10.0 Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation, applicable wage structure, wage rules, etc before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions.
- 11.0 For any clarification on the tender document, the bidder may seek the same in writing or through e-mail, as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay or any other delays. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.
- 12.0 BHEL may decide holding of pre-bid discussion [PBD] with all intending bidders as per date indicated in the NIT. The bidder shall ensure participation for the same at the appointed time, date and place as may be decided by BHEL. Bidders shall plan their visit accordingly. The outcome of pre-bid discussion (PBD) shall also form part of tender.
- 13.0 In the event of any conflict between requirement of any clause of this specification/ documents/drawings/data sheets etc or requirements of different codes/standards specified, the same to be brought to the knowledge of BHEL in writing for clarification before due date of seeking clarification (whichever is applicable), otherwise, interpretation by BHEL shall prevail. Any typing error/missing pages/ other clerical errors in the tender documents, noticed must be pointed out before pre-bid meeting/submission of offer, else BHEL's interpretation shall prevail.
- 14.0 Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
- 15.0 Bidders shall submit Integrity Pact Agreement (Duly signed by authorized signatory who signs in the offer), **if applicable**, along with techno-commercial bid. This pact shall be considered as a preliminary qualification for further participation. **The names and other details of Independent External Monitor (IEM) for the subject tender is as given at point (1) above.**
- 16.0 The Bidder has to satisfy the Pre Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of satisfying the Pre Qualification Criteria specified in this NIT as per Annexure-I (as applicable), past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD.
- 17.0 In case BHEL decides on a 'Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorised representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders.
- 18.0 Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise.

- 19.0 BHEL reserves the right to decide the successful bidder on the basis of Reverse Auction process. In such case all qualified bidders will be intimated regarding procedure/ modality for Reverse Auction process prior to Reverse Auction and price will be decided as per the rules for Reverse Auction. .
- However, if reverse auction process is unsuccessful as defined in the RA rules/procedures, or for whatsoever reason, then the sealed 'PRICE BIDS' will be opened for deciding the successful bidder. BHEL's decision in this regard will be final and binding on bidder.
- 20.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
- 21.0 In case the bidder is an "Indian Agent of Foreign Principals", 'Agency agreement has to be submitted along with Bid, detailing the role of the agent along with the terms of payment for agency commission in INR, along with supporting documents.
- 22.0 The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.
- 23.0 Consortium Bidding (or Technical Tie up) shall be allowed only if specified in Pre Qualifying Requirement (PQR) criteria, and in such a case the following shall be complied with:
- 23.1 Prime Bidder and Consortium Partner or partners are required to enter into a consortium agreement with a validity period of six months initially. In case the consortium is awarded the contract, then the Consortium Agreement between the Prime Bidder and Consortium Partner or partners shall be extended till contractual completion period including extension periods if any applicable.
- 23.2 'Stand alone' bidder cannot become a **Prime Bidder or a Consortium bidder or Technical Tie up bidder in a consortium (or Technical Tie up) bidding**. Prime bidder shall neither be a consortium partner to other prime bidder nor take any other consortium partners. However, consortium partner may enter into consortium agreement with other prime bidders. In case of non compliance, consortium bids of such Prime bidders will be rejected.
- 23.3 Number of partners for a consortium Bidding (or Technical Tie up) shall be as specified in the PQR
- 23.4 Prime Bidder shall be as specified in the Pre Qualification Requirement, else the bidder who has the major share of work
- 23.5 In order to be qualified for the tender, Prime Bidder and Consortium partner or partners shall satisfy (i) the Technical 'Pre Qualifying Requirements' specified for the respective package, (ii) "Assessment of Capacity of Bidder" as specified in clause 9.0
- 23.6 Prime Bidder shall comply with additional 'Technical' criteria of PQR as defined in 'Explanatory Notes for the PQR'
- 23.7 Prime Bidder shall comply with all other Pre Qualifying criteria for the Tender unless otherwise specified
- 23.8 In case customer approval is required, then Prime Bidder and Consortium Partner or partners shall have to be individually approved by Customer for being considered for the tender.
- 23.9 Prime Bidder shall be responsible for the overall execution of the contract
- 23.10 In case of award of job, Performance shall be evaluated for Prime Bidder and Consortium Partner or partners for their respective scope of work(s) as per prescribed formats
- 23.11 In case the Consortium partner or partners back out, their SDs shall be encashed by BHEL. In such a case, other consortium partner or partners meeting the PQR have to be engaged by the Prime Bidder, and if not, the

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respective work will be withdrawn and executed on risk and cost basis of the Prime Bidder. The new consortium partner or partners shall submit fresh SDs as applicable.

- 23.12 In case the prime Bidder withdraws, the whole contract shall be considered cancelled and short closed.
- 23.13 After execution of work, the work experience shall be assigned to the Prime Bidder and the consortium partner or partners for their respective scope of work. After successful execution of two similar works with the same consortium partner or partners under direct orders of BHEL, the Prime Bidder shall be eligible for becoming a 'stand alone' bidder for similar works, subject to certification from BHEL about the active involvement of the Prime Bidder for satisfactory execution of the works.
- 23.14 The consortium partner shall submit SD equivalent to 2% of the total contract value in addition to the SD to be submitted by the prime Bidder for the total contract value. In case there are two consortium partners, then each partner shall submit SD equivalent to 1% of the total contract value in addition to the SD to be submitted by the prime Bidder for the total contract value.
- 23.15 In case of a Technical Tie up, all the clauses applicable for the Consortium partner shall be applicable for the Technical Tie up partner also
- 24.0 The bidder shall submit documents in support of possession of 'Qualifying Requirements' duly self certified and stamped by the authorized signatory, indexed and properly linked in the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately.
- 25.0 The bidder may have to produce original document for verification if so decided by BHEL.
- 26.0 Order of Precedence
In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:
- a. Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL
 - b. Notice Inviting Tender (NIT)
 - c. Price Bid
 - d. Technical Conditions of Contract (TCC)—Volume-1A
 - e. Special Conditions of Contract (SCC) —Volume-1B
 - f. General Conditions of Contract (GCC) —Volume-1C
 - g. Forms and Procedures —Volume-1D

It may please be noted that guidelines/rules in respect of suspension of business dealings', 'Vendor evaluation format', 'Quality, Safety & HSE guidelines', etc may undergo change from time to time and the latest one shall be followed

for BHARAT HEAVY ELECTRICALS LTD

AGM Pur

Enclosure

1. Annexure-1: Pre Qualifying criteria.
2. Annexure-2: Check List .
3. Annexure-3: Important Information .
4. Other Tender documents as per this NIT.

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

BHEL PSWR,
SRIMOHINI COMPLEX
345 KINGSWAY
NAGPUR 440001
INDIA

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

- 1.0 Pratish Gee Varghese / Sr Engineer Purchase, Email id: pgv@bhelpswr.co.in, Ph: +91 – 712 – 3048713
- 2.0 S K Agrawal / AGM Purchase, Email id: ska@bhelpswr.co.in. Ph: +91 – 712 – 3048633

ANNEXURE - 1**PRE QUALIFYING REQUIREMENTS**

JOB	PORT CLEARANCE AT DJIBOUTI AND CROSS COUNTRY TRANSPORTATION OF CARGO TO TENDAHO SUGAR FACTORY , 2X40 MW STG SET AT TENDAHO NEW SUGAR FACTORY , AFAR REGIONAL STATE, ETHIOPIA
TENDER NO	BHE/PW/PUR/ TENDHI-TPT/1238

SL NO	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Name and Description of qualifying criteria	Page no of supporting document. Bidder must fill up this column as per applicability
A	Submission of Integrity Pact duly signed (if applicable) (Note: To be submitted by Prime Bidder & Consortium/Technical Tie up partner jointly in case Consortium bidding is permitted, otherwise by the sole bidder)	NOT APPLICABLE	
B	<u>Technical</u> 1.0 Bidder must have been in the business of 'Transportation of Consignments' in last seven years as on latest date of bid submission 2.0 Bidder must be registered Logistics operator with valid business license applicable in Ethiopia for Transportation / freight forwarding Bidders shall submit duly signed copy of documents in support of above PQR	APPLICABLE	
C-1	<u>Financial TURNOVER</u> Bidders must have achieved an average annual financial turnover (Audited) of ETB 13,80,000 or more over last three Financial Years (FY) i.e as on July 2013, July 2012 and July 2011.	APPLICABLE	
C-2	<u>NETWORTH</u> (only in case of Companies) Net worth of the Bidder based on the latest Audited Accounts as furnished for 'C-1' above should be positive	APPLICABLE	
C-3	<u>PROFIT</u> Bidder must have earned cash profit in any one of the three Financial Years as applicable in the last three Financial Years defined in 'C-1' above based on latest Audited Accounts.	APPLICABLE	
D	Assessment of Capacity of Bidder to execute	NOT APPLICABLE	By BHEL

	the work as per sl no 9 of NIT (if applicable)		
E	Approval of Customer (if applicable) Note: Names of bidders (including consortium/Technical Tie up partners in case consortium bidding is permitted) who stand qualified after compliance of criteria A to D shall be forwarded to customer for their approval.	NOT APPLICABLE	BY BHEL
F	Price Bid Opening Note: Price Bids of only those bidders shall be opened who stand qualified after compliance of criteria A to E	APPLICABLE	BY BHEL
F	Technical Tie up criteria (if applicable)	NOT APPLICABLE	
<p><u>Explanatory Notes for the PQR (unless otherwise specified in the PQR):</u></p> <ol style="list-style-type: none"> 1. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated against C-1 above along with all annexures 2. In case audited Financial statements have not been submitted for all the three years as indicated against C-1 above, then the applicable audited statements submitted by the bidders against the requisite three years, will be averaged for three years i.e total divided by three. 3. C-2:-NETWORTH : Shall be calculated based on the latest Audited Accounts as furnished for C-1 above. Net worth = Paid up share capital + Reserves. (Net worth is required to be evaluated in case of companies) 4. C-3:- PROFIT : shall be NET profit (PAT + Non cash expenditure viz depreciation) earned during any one of the three financial years as in C-1 above 5. 'Additional' Criteria in respect of 'Technical' criteria of PQR (as in 'B' above) for Civil, Electrical, CI, unless otherwise specified :- <ol style="list-style-type: none"> 1. Bidder should have executed similar work of any one of the following: <ol style="list-style-type: none"> a. One (1) work of value not less than Rs XXX OR b. Two (2) works of not less than Rs YYY OR c. Three (3) works of not less than Rs ZZZ (Value XXX, YYY, ZZZ shall be as indicated by BHEL) 2. 'Similar' work for criteria 5 above means <ol style="list-style-type: none"> a. Civil or Structures or Civil & Structures or Chimney respectively as applicable to the tendered scope in respect of 'CIVIL' Works b. Electrical works in respect of 'ELECTRICAL' c. CI works in respect of 'CI' Works d. Material Handling and/or Management works in respect of 'MM' works 6. Time period for achievement of the 'Technical' criteria of PQR (as in 'B' above) will be the last 7 years ending on the 'latest date' of Bid submission 7. 'EXECUTED' means the Vendor should have achieved the criteria specified in the Technical criteria of PQR (as in 'B' above) even if the Contract has not been completed or closed 8. Unless otherwise specified, for the purpose of 'Technical' criteria of PQR (as in 'B' above), the word 'EXECUTED' means: <ol style="list-style-type: none"> 1. "BOILER LIGHT UP" in respect of Boiler & Aux and ESP 2. "SYNCHRONISATION" in respect of STG/GTG and 'SPINNING' in case of HTG 3. "STEAM BLOWING COMPLETION" in respect of at least Main Steam Line of Power Cycle Piping 4. "HYDRAULIC TEST" of the system in respect of Structures, Pressure parts/IBR Piping 5. "CHARGING" in respect of power Transformers, Bus ducts, HT/LT switchgears 6. "Completion of RCC Shell and liner (steel or brick as per tendered scope) up to the HEIGHT specified using slip form" in case of RCC Chimney. 			

<p>7. Achievement of physical Quantities as per respective PQRs in respect of Civil & Structures and Piling Works</p> <p>8. "Readiness for coal Filling" in respect of Bunker Structure Work.</p> <p>9. Boiler means HRSG or WHRB or any other types of Steam Generator</p> <p>10. Critical/Power Cycle piping means Main Steam, Hot Reheat, Cold Reheat, HP Bypass, LP Bypass lines</p> <p>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.</p> <p>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.</p> <p>13. Scope for capital overhaul of STG shall cover Bearing Inspection work and overhauling of all cylinders of the Turbine unless otherwise specifically indicated in the PQR.</p> <p>14. In case the tendered scope is not a Pulverised Fuel Boiler, experience of Oil/Gas Fired Boilers also can be considered unless otherwise specifically indicated in the PQR</p> <p>15. The value of work (Experience submitted against PQR B) shall be updated as per the PVC indices for "All India Avg. Consumer Price Index for Industrial Workers" with base month as date of execution (completion of contract/work) and indexed upto two months prior to bid opening month.</p>

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.

ANNEXURE - 2

CHECK LIST

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

1	Name and Address of the Tenderer		
2	Details about type of the Firm/Company		
3	Details of Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Fax No:	
4	EMD DETAILS	DD No: Date : Bank : Amount: <u>Please tick (✓) whichever applicable:-</u> ONE TIME EMD / ONLY FOR THIS TENDER	
		APPLICABILITY	BIDDER REPLY
5	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
6	Whether Audited profit and Loss Account for the last three years submitted	Applicable	YES/NO
7	Whether Copy of PAN Card submitted	Applicable	YES/NO
8	Whether all pages of the Tender documents including annexures, appendices etc are read understood and signed	Applicable	YES/NO
9	Integrity Pact	Not Applicable	Not Applicable
10	Declaration by Authorised Signatory	Applicable	YES/NO
11	Whether No Deviation Certificate submitted	Applicable	YES/NO
12	Whether Declaration confirming knowledge about Site Conditions submitted	Applicable	YES/NO
13	Whether Declaration for relation in BHEL submitted	Applicable	YES/NO
14	Whether Non Disclosure Certificate submitted	Applicable	YES/NO
15	Whether Bank Account Details for E-Payment submitted	Applicable	YES/NO
16	Capacity Evaluation of Bidder for current Tender	Not Applicable	Not Applicable
17	Tie Ups/Consortium Agreement are submitted as per format	Not Applicable	Not Applicable
18	Whether Power of Attorney for Submission of Tender/Signing Contract Agreement submitted	Applicable	YES/NO
19	Whether Analysis of Unit rates submitted	Applicable	YES/NO

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

DATE :

AUTHORISED SIGNATORY
(With Name, Designation and Company seal)

Important Information

- i. **All interested Bidders who is having valid commercial registration and business license for Transportation/ logistic work at Ethiopia shall be eligible to participate in this tender.**
- ii. **No payment shall be admissible other than mentioned in the Contract under, any circumstances.**
- iii. **The tender document shall be hosted in BHEL web page (www.bhel.com) and bidders are requested to download the complete tender specification. In case bidders are unable to download the tender specifications from BHEL web page, on specific request from vendors, BHEL will send the total tender specification by e-mail.**
- iv. **Bidder should ensure that their complete offer in hard copy should reach to BHEL- Nagpur office on or before due date & time mentioned in NIT. Late tender shall not be accepted in any circumstances.**
- v. **Offer shall be submitted by bidders in ENGLISH Language only. Also any correspondence shall be in English Language.**
- vi. **All the bidders shall quote the price in Ethiopian Birr (ETB) only in Price Bid**
- vii. **Bidders must get familiarized with Ethiopian laws, regulations on How to do Business in Ethiopia and also traffic, customs, law and order related, Road safety, Port and other relevant and any laws required to be observed in execution of this Job. BHEL shall not be in a position to consider any compensation on account of any loss to Contractor on such account.**

viii.

PRICE EVALUATION:

- Bidder has to quote **PER CBM RATE** for port clearance, custom clearance, inspection fee, documentation charge etc in Item No A1.1 of Volume II Price Bid
- Bidder shall quote unit price for the work of transportation of consignment/ shipment in terms of per FT (Freight Ton) (in Item No A1.2 of Volume II Price bid for all items other than those in item No A1.3 of Volume II Price Bid).

Definition of Freight Ton:

“Bill of Lading (BL) will indicate weight of consignment in KG & Volume of consignment in CBM. **Higher between these two shall be considered as “Freight Ton”**

- Bidder shall quote unit price for the work of Cross country transportation of consignment/ shipment for 4 Nos of heavy shipment in Item No A1.3 of Volume II Price Bid

- ix. **Evaluation of prices shall be done in Ethiopian Birr.**
- x. **Work order shall also be placed in Ethiopian Birr only.**
- xi. **Slab for the rates of Security Deposit as given in Clause 1.10.1 of 'General Conditions of Contract' may suitably be converted into ETB @ 0.30772 ETB per Rupee**
- xii. **Ethiopian can submit their EMD/Cost of documents of requisite amount at BHEL Office, Ethiopia office at the following address:**
- BHEL Office, No.210, 2nd Floor, Sami Bldg, Gerji Road, Bole Sub City, Addis Ababa Ethiopia**
- xiii. **Wherever the BG (Bank Guarantee) is required to be submitted as per tender specifications , the following procedure is to be adopted by bidder**
- Details shall be issued later**
- xiv. The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site (www.bhel.com ---> Tender Notification -> List of Banned Firms)
- xv. All Statutory Requirements as applicable for this project shall be complied with.
- xvi. **Liquidated Damages/Penalty**
- Liquidated Damages/penalty Clause no. 2.7.9 of Vol I C GCC shall not be Applicable. Instead Clause 2.0.11 of Technical Conditions of Contract shall be applicable.**
- xvii. **Broad Terms & Conditions of Reverse Auction**

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

- a. Against this enquiry for the subject item/ system with detailed scope of supply as per enquiry specifications, BHEL may resort to "REVERSE AUCTION

- PROCEDURE" i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).
- b. BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids. In case BHEL decides to go for Reverse Auction, only those bidders who have given their acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit „online sealed bid“ in the Reverse Auction. Non-submission of „online sealed bid“ by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
 - c. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
 - d. 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.
 - e. 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.
 - f. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
 - g. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
 - h. Bidders have to fax the Compliance form (annexure IV) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
 - i. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for noncompliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
 - j. Reverse auction will be conducted on scheduled date & time.
 - k. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
 - l. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (Annexure VII) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
 - m. 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.

-
- n. 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.
 - o. 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.
 - p. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
 - q. 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.

ANNEXURE – 4

Forms to be filled and submitted along with the tender

Bidders shall submit duly filled in and signed forms as given in Annexure 4 of this NIT

DECLARATION BY BIDDER'S AUTHORIZED SIGNATORY

TENDER SPECIFICATION No. BHE/PW/PUR/TENDHE-TPT/1238

I, _____ HEREBY CERTIFY THAT ALL THE INFORMATION AND DATA FURNISHED BY ME WITH REGARD TO THIS TENDER SPECIFICATION ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE. I HAVE GONE THROUGH THE SPECIFICATIONS, CONDITIONS AND STIPULATIONS IN DETAIL AND AGREE TO COMPLY WITH THE REQUIREMENTS AND INTENT OF THE SPECIFICATION. I FURTHER CERTIFY THAT I AM DULY AUTHORISED REPRESENTATIVE OF THE UNDERMENTIONED BIDDER AND A VALID POWER OF ATTORNEY TO THIS EFFECT IS ALSO ENCLOSED.

DATE:

SIGNATURE OF AUTHORIZED SIGNATORY WITH SEAL

ANNEXURE – 4 B

CERTIFICATE OF NO-DEVIATION

TENDER SPECIFICATION No. BHE/PW/PUR/TENDHE-TPT/1238

I/WE, M/s.....

HEREBY CERTIFY THAT NOTWITHSTANDING ANY CONTRARY INDICATIONS/ CONDITIONS ELSEWHERE IN OUR OFFER DOCUMENTS, I/WE HAVE NEITHER SET ANY TERMS AND CONDITIONS NOR THERE IS ANY DEVIATION TAKEN FROM THE CONDITIONS OF BHEL'S TENDER SPECIFICATIONS, EITHER TECHNICAL OR COMMERCIAL, AND I/WE AGREE TO ALL THE TERMS AND CONDITIONS MENTIONED IN BHEL'S TENDER SPECIFICATION WITH ASSOCIATED AMENDMENTS AND CLARIFICATIONS.

Date:

Seal & Signature of the Bidder

ANNEXURE – 4 C

**CERTIFICATE CONFIRMING
KNOWLEDGE ABOUT SITE CONDITIONS**

TENDER SPECIFICATION No. BHE/PW/PUR/TENDHE-TPT/1238

We, M/s
hereby declare and confirm that we have visited the project site(s) for which we have submitted our offer and acquired full knowledge and information about the site conditions.

We further confirm that the above information is true and correct and we shall not be eligible for any additional payment of any nature due to lack of knowledge or non-familiarization of site conditions.

BIDDER'S NAME AND ADDRESS:

SIGNATURE & OFFICIAL SEAL OF BIDDER'S
AUTHORISED SIGNATORY

PLACE:

DATE:

ANNEXURE – 4 D

DECLARATION SHEET

TENDER SPECIFICATION No. BHE/PW/PUR/TENDHE-TPT/1238

The Bidders are requested to furnish the following information while quoting, failing which their offer will be summarily rejected.

1. Whether any relative(s) of Partner/Director
/Owner is presently employed in BHEL? : **YES/ NO**
If so, his connection with the Firm **(If yes, please give particulars)**
2. Whether any BHEL employee is : **YES/NO** (If yes, please give
Holding any share in Firm? particulars)

Signature & Official Seal of the Tenderer

Note:

1. Attach separate sheet, if necessary.
2. If the BHEL Management comes to know, at a later date, that the information furnished by the Bidder is false, suitable action will be taken according to law against the contractor

ANNEXURE – 4 E

NON DISCLOSURE CERTIFICATE

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

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

- 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 PSWR.

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

Date:

1238

TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHARAT HEAVY ELECTRICALS LIMITED



TECHNICAL CONDITIONS OF CONTRACT (TCC)

SI No	DESCRIPTION	Chapter	No. OF PAGES
Volume-IA			
1	Project Information	Chapter-I	02
2	Technical Conditions of Contract	Chapter-II	14
9	Annexures:-		
10	Tentative scope of Equipment/systems covered.	Annexure - I	09
11	Tentative Weight details and Dimensions of Major Equipments for each unit	Annexure-II	06

TECHNICAL CONDITIONS OF CONTRACT (TCC)

1.0	Chapter-I Project Information
1.1	<p>INTROUCTION</p> <p>Tendaho Sugar Factory, Ethiopia on behalf of Government of Federal Democratic Republic of Ethiopia having its principal place of business at P. O Box 2574 , Salfaz Building (in front of Atlas Hotel), Cape Verde Road, Addis Ababa, Ethiopia, intended to install new Sugar Factory with designed cane crushing capacity of 26,000 tons per hour at Tendaho.</p> <p>M/s Tendaho Sugar Factory have engaged M/s Overseas Infrastructure Alliance (India) Pvt Ltd having its principal place of Business at 1205, Surya Kiran Building, 19, Kasturba Gandhi Marg, New Delhi – 110001 as their EPC contractor.</p> <p>M/s Overseas Infrastructure Alliance (India) Pvt Ltd have awarded job of Design, Manufacture, Supply to Port Djibouti, transport to the site (Tendaho Sugar Factory), Store, Erection of mechanical and electrical equipment, train employers personnel, commissioning, testing and handover Power Generation Plant of capacity 2x20 MW STG in Phase-I (which is already under progress) and 2x40MW in Phase-II (which is going to start) to Bharat Heavy Electrical Limited having its Head Office at BHEL House, Siri Fort, New Delhi – 110049 (India)</p> <p>LOCATION & APPROACH</p> <p>i). Project Name: Tendaho Sugar Factory Project , 2x40 MW</p> <p>ii). Project Location: Tendaho Sugar Factory, Afar Regional State, Ethiopia.</p> <p>iii). Transport facilities:</p> <p>i. Road : Project site is located in the lower Awash valley of Afar administration region, about 600 km North East to Addis Ababa.</p> <p>ii. Airport : Nearest Airport is Samera.</p> <p>iii. Sea Port : Port of entry for imported goods by marine transport is 'Port of Djibouti'., which is around 392 km from site. The transportation from Port Djibouti to Tendaho site is by Addis Djibouti tarmac highway.</p> <p>GEOGRAPHICAL CONDITIONS:</p>

TECHNICAL CONDITIONS OF CONTRACT (TCC)

	i). Height above Mean Sea level : 350 m
	Seismic zone : Zone - II
1.2	CLIMATIC CONDITIONS
	i). Maximum ambient Temperature . : +45° Centigrade
	ii). Minimum ambient Temperature. : +17° Centigrade
	iii). Relative Humidity range : 96 % Max & 37 % Min.
	iv). Rainy season : July to October
	v). Average rainfall : 235 mm

TECHNICAL CONDITIONS OF CONTRACT (TCC)

2.0 SCOPE OF WORK

The work to be carried out under the scope of these specifications is broadly as under:

Logistics work at Djibouti and cross country transportation of cargo of 2x40 mw STG set at Tendaho New Sugar Factory, Afar Regional State, Ethiopia.

2.0.0.1 DETAIL SCOPE OF WORK

AA Customs Clearance, Port clearance, Scanning using Contractor's own funds reimbursable later at Djibouti and cross country Transportation of Cargo to Tendaho Sugar Factory

1. a Arranging all permits at Djibouti Port for cross country transportation of cargo.
b Unloading of cargo from the ship
c Lashing / securing & reloading on trailer,
d Transportation from Port to Tendaho Sugar Factory
e Placement of cargo/ Truck / trailer at the designated place to enable unloading at site.
f Transportation of empty container to the Shipping Company if required.
2. Contractor shall have their liaison office at Addis Ababa for coordination with various agencies. The contractor should have valid commercial registration, VAT, TIN and business license as per Ethiopian rules and regulation.
3. The containers / Break Bulk cargo shall be custom cleared at Djibouti or any other suitable place in Ethiopia as desired by customs department of Ethiopia and transported to designated sites at Ethiopia. All expenses for custom clearance (except any custom duty) & Container Security Deposits shall be borne by the Transporters.
4. The empty containers shall be returned to the Djibouti port by Contractor after unloading of Cargo at site by the contractor.
5. Use of Shore cranes is permitted without any financial liability to BHEL. The contractor shall be responsible for safe unloading and loading of Heavy Packages. Any damages during these operations if adopted, it will be the sole responsibility of the contractor to make good the losses to the product and any other incidental damages.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

6. Contractor should ensure port handling; transportation and delivery of goods with utmost care and in a professional manner. Contractor should follow manufacturer's lifting & handling instructions on packages. Contractor will be responsible for any damage due to negligence to follow manufacturer's instructions or due to use of wrong lifting and handling equipments.
7. The shipment is expected to commence **from Feb- 2014 and may last up to Jan- 2016.**
8. Endorsements on the relevant documents from concerned authorities are to be obtained by the Contractor. BHEL / BHEL'S Site representatives shall issue receipt at site for material delivered and the same shall be obtained by the Contractor. BHEL Addis Ababa office/ Customer's office (OIA/OID) shall extend all necessary support for the required paper works.
9. Under the contract the custom duty is not payable for the T&P taken on returnable basis .Contractor shall declare list of T&P along with it's value for getting custom clearance at Ethiopia.
10. Ocean Freight Payment to Ethiopian Shipping lines shall be done directly by Employer (Tendaho Sugar Factory), however for air shipment (if any) through Ethiopian Airlines or any other airline against the items shipped by BHEL and its suppliers shall be done by contractor's Addis Ababa office and BHEL will reimburse the air freight charge.
11. This will be the responsibility of Contractor to collect all papers from BHEL Addis Ababa office/ Customer office. BHEL/customer will arrange duty free letter, Bank permit, original or copy B/L with letter from Shipper, invoice and packing list. Contractor shall be intimated over phone / e-mail about the readiness of papers. After receipt of papers contractor will arrange custom clearance & discharge letter from Ethiopian shipping lines / Ethiopian Airlines. Contractor will make payments for freight (only for air shipment), container security, port demurrage (if any). BHEL will reimburse air freight charge. Demurrage (if delay is due to BHEL only). Returning the container safely is Contractor's responsibility hence container security amount will not be reimbursed.

2.0.0.2 **DETAIL SCOPE OF WORK**

2.0.1

The work shall be executed under the usual conditions affecting major power plant construction and in conjunction with numerous other operations at site. The bidder and his personnel shall co-operate with the personnel of other agencies, co-ordinate his

TECHNICAL CONDITIONS OF CONTRACT (TCC)

work with others and proceed in a manner that shall not delay or hinder the progress of work as a whole.

2.0.2

All the necessary certificates and licenses required to carryout this work are to be arranged by the contractor expeditiously at his cost.

2.0.3

The work to be carried out under the scope of these specifications covers the complete work of -

AA Port clearance at Djibouti and cross country Transportation of Cargo to Tendaho Sugar Factory

2.0.4

The indicative schedule of weight of major equipments given at Relevant Annexure is meant for providing a general idea to the contractor about the magnitude of the work involved. **No ODC shipment is envisaged in this contract.**

2.0.5

All tools and tackles, fixtures, equipments, materials, manpower, supervisors/ engineers, consumables etc. required for this scope of work shall be provided by the contractor. All expenditure including applicable taxes if any and incidentals in this connection will have to be borne by him unless otherwise specified in the relevant clause.

2.0.6

All equipments shall be handled very carefully to prevent any damage or loss.

2.0.7

All necessary certificates and licenses, permits & clearances required to carry out this work are to be arranged by the contractor expeditiously at his cost.

2.0.8

Materials shall be transported by The truck/Trailer/container upto Tendaho site and report to BHEL/ Site office. In case of detention at Tendaho site for the reason attributable to BHEL beyond three days (72hrs) shall be @ 2500 ETB per day. However, the detention charges other than Tendaho site shall not be payable.

2.0.9

TECHNICAL CONDITIONS OF CONTRACT (TCC)

The quantity of CBM indicated of **3468 CBM** in price Bid as well as weights of **1200MT** as per Annexure –III and the contract period is an indicative.

2.0.10

The works inclusive of all activities of co-ordination for Customs clearance, taking delivery, storage at port (if required), escorting, safe transit/transportation, weigh bridge charges, permissions and road survey , Unloading & Reloading with required crane/ Forklift etc

2.0.11

The contractor shall take all necessary clearances for taking delivery of material from port immediately after receipt of original shipping document and deliver material at site without any delay. If any demurrage is payable to port authorities due to delay in handing over of shipping document, **contractor has to pay the port demurrage charges/ storage charges**. BHEL shall reimburse the charges limited to the demurrage charge/ storage charge at port for the delay due to BHEL. **Contractor shall clear all materials of a particular Bill of lading from Port authorities within 10 days** of handing over of document. Overall duration allowed for delivery of materials shall be 20 days from date of receiving Bill of Lading for quantity up to 250 FT.

- i. **If material is not released from port within 10 days of handing over of document, storage charge / port demurrage as charged by port authorities as per port rules shall be attributable on contractor beyond the said period.**
- ii. **If material is not delivered at Tendaho site within 20 days from the date of handing over of shipping documents to Contractor for reasons attributable to Contractor alone, it will be treated as delayed delivery. Penalty shall be imposed for no. of days delay attributable to Contractor as follows:-**

@ ETB 100 per FT per day

2.0.12

Scanning charges shall be payable to custom authorities to inspect the shipment. If this rule is in force contractor shall pay the scanning charges and reimburse the amount from BHEL by submitting original scanning receipt by custom authorities after delivery of material at site.

2.0.13

Contractor has to **handover original ECD** (Ethiopian Custom Declaration) to BHEL on completion delivery of materials in a particular Bill of Lading.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

3.0 OBLIGATIONS OF THE CONTRACTOR (LABOUR COLONY, TOOLS AND TACKLES, CONSUMABLES, INFRASTRUCTURES, ETC.)

3.1 LABOUR COLONY

3.1.1 Space & Construction

Not applicable

3.1.2 Electricity

Not applicable

3.1.3 Potable & drinking Water

Not applicable

3.2 TOOLS AND PLANTS

Not applicable

3.3 Field Office

Not applicable

3.4 Area Lighting

Not applicable

3.5 CONSTRUCTION POWER

Not applicable

3.6 CONSTRUCTION WATER

Not applicable

3.7 RESPONSIBILITIES WITH REGARD TO LABOUR EMPLOYMENT ETC.

Refer relevant clauses of general conditions of contract in this regard.

3.7.1

Contractor shall also comply with the requirements of local authorities/ project authorities calling for police verification of antecedents of the workmen, staff etc.

3.7.2

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. Contractor shall enable such facilities to BHEL / customer.

3.7.3

TECHNICAL CONDITIONS OF CONTRACT (TCC)

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 lay 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.

3.7.4

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 contractor's side BHEL will make suitable alternate arrangements at the risk and cost of contractor. The expenditure incurred with overheads thereby shall be recovered from the contractor.

3.8 SUBMISSION OF PERIODICAL REPORTS

Contractor shall submit periodical reports in respect of following aspects of operation: After receipt of bill of lading from BHEL, the contractor shall send daily/weekly report (By email) to BHEL authorised persons. The daily report shall be submitted with the status of:

- 1) Clearance at Djibouti port
- 2) Unloading from ship in the truck/trailer
- 3) Movement of the truck/trailer from Djibouti port to Ethiopian border.
- 4) Clearance at the border of Djibouti & Ethiopia.
- 5) Movement of truck/trailer from border to Tendaho Sugar Factory

BHEL at site will suggest formats for these reports.

Contractor shall deploy only qualified and experienced engineers/ supervisors. They shall have professional approach in executing the work.

3.8.1 The contractor's supervisory staff shall execute the work in the most professional manner in the stipulated time.

3.8.2 The supervisory staff employed by the contractor shall ensure proper out-turn 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.

3.8.3 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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

3.9 Site Organization to execute work

The contractor shall provide adequate staffing in the following major areas.

- Planning, Monitoring and Control
- Progress Reporting to BHEL/ Construction Manager
- Industrial relations and welfare including Safety during the course of execution.

Contractor shall furnish an organisation chart indicating the staffing pattern for the above functions. Contractor shall provide the names and details of engineer/supervisors as per the proposed organization chart.

3.10 Industrial Relations and Labour Laws

As applicable at Ethiopia

4.1 MOBILIZATION, TIME SCHEDULE, CONTRACT PERIOD AND GRACE PERIOD

4.1.1 Contractor shall mobilize necessary resources within shortest possible time of issue of fax letter of intent to commence the work. Such resources shall be progressively augmented to match the requirement of BHEL as per intimation.

4.1.2 Mobilization for Local Transportation from Port to Site etc.

First consignment is expected to be **dispatched from Feb'14**. Contractor has to mobilise its resources to coordinate the formalities to be completed for fulfilling statutory requirements and unloading the consignment at Port of landing and arrange for onward transportation to Site. All necessary lifting equipments and trailer / trucks etc are to be arranged by the contractor.

4.1.3 COMMENCEMENT OF CONTRACT PERIOD AND TENTATIVE SCHEDULE

Unloading date of first major item of the consignment at site shall be recognized as “start of Contract period”

4.1.4 START OF CONTRACT PERIOD AND DURATION

The total contract period for completion of entire work **shall be 21 (Twenty One) months from the date of start of Contract period.**

TECHNICAL CONDITIONS OF CONTRACT (TCC)

The contractor shall complete all the work in the scope of this contract within the contract period.

4.1.5 GRACE PERIOD

NOT applicable

4.2 CONTRACT EXTENSION

4.2.1 If the completion of work as detailed in these specifications gets delayed beyond the end of contract period then depending on the balance work left out, BHEL at its discretion may extend the contract.

4.3 OVERRUN COMPENSATION

NOT Applicable

4.4 PROGRESS MONITORING

NOT APPLICABLE

4.5 PRICE VARIATION

NOTAPPLICABLE

4.6 CONTRACT VARIATIONS

4.6.1 VARIATION IN WEIGHT/ QUANTITY

Quantity & weight of various equipments and items of work covered under the tender specification are likely to vary. For any upward or downward variation in quantities as well as weight, the unit rate quoted in the price bid shall remain unchanged. Payment shall be released on actual quantity executed.

4.7 Mobilization Advance

No mobilization advance is payable under this tender specifications.

4.8 INTEREST BEARING RECOVERABLE ADVANCE

NOT Applicable

4.9 DEFINITION OF WORK COMPLETION

TECHNICAL CONDITIONS OF CONTRACT (TCC)

The contractor's scope of work under these specifications will be deemed to have been completed in all respect, only when the entire materials delivered at site and all related activities are completed satisfactorily and so certified by BHEL site in charge. The decision of BHEL in this regard shall be final and binding on the contractor.

5.0 TERMS OF PAYMENT

5.0.1

The contractor shall submit his monthly RA account 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. However, first RA Bill shall be released only after signing of Contract Agreement.

5.0.2

Release of payment in each running bill will be restricted to 90% of the value of work admitted, as per the percentage break-up for the stage of work completion stipulated vide clauses hereinafter.

The 5% shall be released on submission of original ECD with respect to the Bill of lading.

Remaining 5% shall be on account of workmanship guarantee of work executed. The same will be released after 3 Months from completion of entire scope of work and the release of final Bill.

5.0.3

The payment for running bills will normally be released within around 30 days of submission of running bill with measurement sheets. Contractor shall make his own arrangement for making payment of impending labour wages and other dues in the meanwhile. Along with RA Bills (3 set of copies) the following documents has to be submitted.

- a. Bill of Lading and Packing list
- b. Material delivery report signed by BHEL Site engineer & Contractor.
- c. Scanning charge receipt.
- d. Receipt for Demurrage at port if applicable
- e. Diesel Bill if applicable.
- f. Any other document as per applicability.

5.0.4

BHEL will release payment through cheque. The following details are to be furnished by the Contractor pertaining to his Bank Accounts.

1. Name of the Company
2. Name of Bank
3. Name of Bank Branch
4. City/Place
5. Account Number
6. Account type
7. IFSC code of the Bank Branch
8. MICR Code of the Bank Branch

TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHEL may also choose to release payment by other alternative modes as suitable.

5.1 Stages of Progressive Pro-Rata Payments

Progressive payment for Local Transportation from Djibouti Port to Tendaho site Bill of Quantity given at Appendix – IIB is 1200 MT approximately OR 3468 in Freight Tonnes subject to actual but payable in terms of Freight Tonnes as defined under Price Bid. It is expected to be despatched in consignments by way of Break bulk/ Containers / CBM. The modality of payment shall be as per price schedule.

5.2 Currency of Payment: In ETB (Ethiopian Birrs)

The payments shall be made in ETB (Ethiopian Birrs) to the contractor as per terms of payment given above.

6.0 TAXES & OTHER DUTIES

6.1 The rate quoted by bidders should be inclusive of all Taxes & Duties and BHEL will not reimburse any amount on account of Taxes & Duties including personnel Income tax. Wherever tax exemptions/concessions are allowed to the bidder, the same may be availed by the bidder without attracting any financial implication on BHEL. However, if as per the Ethiopian, BHEL can avail set off against any tax or duty paid by the bidder, the bidder shall provide necessary documents to BHEL to avail such set off.

6.2 All payments to the bidders shall be subject to recovery of all applicable Withholding Tax and / or Tax Deduction at source as per the Ethiopian Laws and /or Indian Law

7.0 Inspection/Quality Assurance/Quality Control/ Statutory Inspection

7.1 Not applicable

7.2 Stage Inspection By FES/QA Engineers

7.3 Not applicable

7.4 Statutory Inspection of Work

TECHNICAL CONDITIONS OF CONTRACT (TCC)

- 7.4.1 After receipt & unloading of the material from truck/trailer, BHEL site engineer shall certify on the necessary document. This document along with all other papers shall be submitted along with invoice to BHEL for release of payment.
- 7.4.2 It shall be contractor's responsibility to obtain approval of statutory authorities, whenever applicable, for the conducting of any work which comes under the purview of these authorities. Any cost arising from this shall be contractor's account.

8.0 Drawings and Documents Not applicable

INSURANCE

9.1 Marine, Storage cum Erection (MCE) Insurance and Repairing Damages

BHEL/client has an MCE insurance cover, inter-alia, for all the permanent project equipments/components supplied by BHEL under scope of this work by way of a transit and storage cum erection policy covering liability against damages/ losses etc.

9.2

The contractor has to arrange on his own, insurance cover for all the T&P and other construction equipments deployed at site. Such assets are not covered in insurance policy taken by BHEL.

9.3

It shall also be the responsibility of the contractor to arrange for accident risk policy/workmen compensation policy for the staff and workmen.

9.4

If the damage occurs during transit, the contractor has to provide assistance in lodging and realizing the insurance claims covered by the MCE insurance policy that is taken by BHEL. Scope shall include receipt inspection (shortage/damage/loss reporting) immediately on arrival of consignment, recording such damage/loss/shortage intimation on the LR/RR/LWB duly countersigned by the driver/transporter's representative while acknowledging receipt of consignment to the concerned transporter, intimating the loss/damage/shortage to BHEL, providing assistance for inspection of the reported consignment at the time of insurance survey, liaisoning with the transporter and insurance company etc.

9.5

In case of theft / damage / loss of materials due to **repeated/continued instances of negligence/failure** attributable to the contractor, the expenses incurred on account of

TECHNICAL CONDITIONS OF CONTRACT (TCC)

repair/ replacement of such components including BHEL's overhead expenses as applicable in excess of the amount realized from the underwriters, if any, shall be recovered from the contractor. Recovery will be limited to Normal Deductible Franchise (DF)/Excess for every incidence of loss/damage.

9.6

In case any insurance claim does not become tenable due to **willful** negligence/ damage/loss attributable to the contractor, the total cost of repair/replacement including BHEL overhead expenses shall be recovered from the contractor.

9.7 Other Requirements:

Following are in contractor's scope:

A

1. Third party liability Insurance

Covering Bodily injury or death suffered by third parties (including the employers personnel) and loss of or damage to property (Including the Owner's property and any part of the package facilities that have been accepted by the Owner occurring in connection with the supply and installation facilities

Amount of Injury or death

For the sub-contractor's employee – 60 months earning of the employee and for other people USD \$ 50,000 person.

Amount for Loss or damage to property – cost of the property

Deductible limits - Nil

Parties insured - Subcontractor

2. Automobile Liability Insurance

Covering use of all vehicles used by subcontractor or it's vendors (whether owned or not owned by them) in connection with the supply and installation of the package facilities. Comprehensive insurance in accordance with statutory requirements in Ethiopia.

3. Worker's Compensation

In accordance with the statutory requirements applicable in Ethiopia.

B:

1. The contractor shall deliver certificate of insurance (Or copies of insurance policies) as evidence that the required policies are in full force and effect. The certificate shall provide that no less than 21 days notice shall be given to BHEL by insurers prior to cancellation or modification of a insurance policy.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

SPECIAL CONDITION OF CONTRACT

10 EARNEST MONEY DEPOSIT, SECURITY DEPOSIT & BANK GUARANTEE

10.1 Earnest Money Deposit:

Refer 'General conditions of Contract'

10.2 Security Deposit

Refer 'General conditions of Contract'

10.3 BANK GUARANTEE

Refer 'General conditions of Contract'

11.0 SUSPENSION OF BUSINESS DEALING WITH CONTRACTORS

11.1 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:

- I. Bidder does not honour his own offer or any of its conditions within the validity period.
- II. After placement of order, Bidder fails to execute a contract.
- III. Bidder fails to settle sundry debt account, for which he is legitimately liable, within one year of its occurrence.
- IV. Bidder's performance rating falls below 60% in specific category.
- V. Bidder works are under strike/ lockout for a long period.

11.2 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:-

- VI. Bidder tampers with tendering procedure affecting ordering process or commits any misconduct which is contrary to business ethics.
- VII. Bidder has substituted, damaged, failed to return, short returned or unauthorizedly disposed off materials/ documents/ drawings/ tools etc of BHEL.
- VIII. Bidder no longer has the technical staff, equipment, financial resources etc. required to execute the orders/ contracts.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

11.3 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:

- IX. Bidder is found to be responsible for submitting fake/ false/ forged documents, certificates, or information prejudicial to BHEL's interest.
- X. In spite of warnings, the Bidder persistently violates or circumvents the provisions of labour laws/ regulations/ rules and other statutory requirements.
- XI. Bidder is found to be involved in cartel formation.
- XII. The Bidder has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage etc which are contrary to business ethics.
- XIII. The Bidder is found guilty by any court of law for criminal activity/ offences involving moral turpitude in relation to business dealings.
- XIV. The Bidder is declared bankrupt, insolvent, has wound up or been dissolved; i.e ceases to exist for all practical purposes.
- XV. Bidder is found to have obtained Official Company information/ documentation by questionable means.
- XVI. Communication is received from the administrative Ministry of BHEL to ban the Bidder from business dealings.

Major Materials to be Despatched to Tendaho Ph-II, STG 2X40MW

(A) Steam Turbine & Auxiliaries:

1. Steam turbine
2. Emergency Trip Cum Stop valve
3. Blanket plate for steam blowing.
4. Turbine steam governing valves (HP and LP).
5. Steam Strainer Built into Stop valve.
6. Reduction Gear box between Turbine & Generator.
7. Coupling and coupling guard between Turbine and Gear Box.
8. Coupling and coupling Guard between Guard between Gear box & Generator.
9. Manual Barring Device.
10. Turning Device –Electric.
11. Solenoid Valve for Remote Tripping.
12. Turbine Sole Plates.
13. Foundation Bolts.
14. Shafts Grounding Device.
15. Mating Flanges for Turbine Inlet, Exhaust and Extraction Flanges.
16. Gland Steam Leak off Piping.
17. Exhaust Hood spray system.
18. Prime coat of paint.
19. Vacuum Breaker Valve.
20. Turbine Drain Water Piping within TG Block.
21. Turbine insulation- mineral wool mattress
22. Insulation of integral piping
23. QCNRVs in Uncontrolled Extraction line & Controlled Extraction Line.
24. Turbine Enclosure.

(B) Oil Supply System:

1. Main Oil Tank (Carbon Steel) Including Drain & Maintenance Openings ,Level Indicator ,Level Signalization High/Low, Connection for Purifier
2. Main Oil Pump with AC Motor.
3. Auxiliary Oil Pump with AC Motor.
4. Emergency Oil Pump with DC Motor.
5. Jacking oil pump with AC motor.
6. Duplex filter for lube oil
7. Trans- flow valves for Duplex oil filters.
8. Oil –Mist fan with Ac Motor (2x100%)
9. Pressure throttles for bearings.
10. Complete lube oil piping (CS material up to LO filter)

TECHNICAL CONDITIONS OF CONTRACT (TCC)

11. Complete lube oil piping (SS material from LO Filter to Bearing).
12. Complete Return Lube oil piping (CS material).
13. Complete control oil piping (stainless steel material)
14. Complete jacking oil piping including throttle valves, Relief valves etc.
15. Overhead lube oil tank with complete piping (Stainless steel material)
16. Control oil accumulators (as required)
17. Oil purifying system (1000 LPH capacity)
18. Governing console consisting of Duplex filter for control oil, main trip solenoid valves, Electric -Hydraulic converters, Solenoid valves for opening and closing emergency stop valves , solenoid valves for resetting the turbine , local Gauge board with governing oil system instruments& other hydraulic components.

(C) Surface Condenser:

1. Two pass divided water box cylindrical condenser.
2. Carbon steel dome, shell, hot well, water box etc and admiralty Brass tubes.
3. Stand pipes for mounting instruments.
4. Sacrificial anodes inside water box for cathodic protection.
5. SS Expansion Bellow.
6. Primer coating on outer surfaces and epoxy coating on water box internals
7. Accessories like rupture disc, water expansion relief valve, vent and drain valves etc.

(D) Steam Jet Air Ejector:

1. 2x100% running ejector with inter and after condensers and one starting ejector with silencer.
2. Nozzle and diffusers for ejectors.
3. Inter and after condensers with carbon steel shell, tube sheet, water box & stainless steel SA 249 TP304 tubes.
4. Steam and air pipes.
5. Accessories like water expansion relief valve vent and drain valves etc.

(E) Gland steam Condenser:

1. GSC with 2x 100% fan & motor.
2. Carbon steel shell, water box and stainless steel SA249 TP 304 tubes.
3. Accessories like tube side relief valves vent and drain valves etc.
4. Primer coating on outer surfaces

(F) ST Oil Cooler :

1. Vertical 2x100% capacity ST Oil cooler.
2. Coolers with carbon steel shell, water box etc and Admiralty Brass tubes.
3. Manually operated 3 – way change over valve.
4. Primer coating on outer surfaces
5. Accessories like vent and drain valves etc.

(G) Generator and Auxiliaries:

1. Closed circuit air cooled generator consisting of stator with output leads (3 phase + 3 neutral)taken out from the sides of the m/c, Rotor suitable for overhang BLE, Bearings , base frame,

TECHNICAL CONDITIONS OF CONTRACT (TCC)

built in RTDs ,space heaters, Bottom mounted air to water coolers (CACW) with n+1)cooler elements.

2. Over hang brush- less exciter with PMG
3. Phase segregated busduct (25M on phase side and 6 M on neutral side) housing CT's PT''s, LA & SP. Extra charge for busduct requirement above the specified length on per meter basis.
4. Neutral Grounding Resistor to limit the fault current to 100A for 30 sec with motorised isolator.
5. Generator conventional control, metering & synchronising panel with auto-synchroniser and multifunctional micro processor based numerical relay panel with1 number redundant multifunctional relay for generator protections.
6. Interconnecting control cables for connection between Generator and generator control and relay panels (length considered is 100m. unit length applicable beyond this length).

(H) STG Air Coolers :

1. Bottom mounted STG Air Cooler.
2. High fin Admiralty Brass tubes with Copper fins, Carbon steel frames.
3. Accessories like CW inlet/ outlet valves vent and drains valves etc.
4. Primer coating on outer surface

(I) Control & Instrumentation for STG & Integral portion :

1. Scope :-
 - 1.1 Electronic Governor for control of Turbine speed, Load, inlet stem pressure, extraction pressure.
 - 1.2 Dual Channel Turbine Shaft Vibration and Axial Displacement Monitoring system (TSI rack) which includes proximity type probes, proximeters and extension cables for the following
 - a) Shaft vibration at turbine front bearing.
 - b) Shaft vibrations at turbine rear bearing.
 - c) Shaft vibrations at Generator front bearing.
 - d) Shaft vibration at Generator rear bearing.
 - e) Shaft vibration at Gear box high speed shaft.
 - f) Shaft vibration at Gearbox low speed shaft.
 - g) Turbine Axial displacement & Key phasor for turbine shaft.
2. Primary instruments to realise the turbine auxiliaries interlock and protections for the following drives in DCS.
 - a) Main oil pump.
 - b) Auxiliary oil pump.
 - c) Emergency lube oil pump.
 - d) Jacking oil pump.
 - e) Oil Vapour Extraction fan.
 - f) Turning gear.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

3. Field Instruments (for STG Integral Portion):

3.1 Bearing thermo-elements for monitoring Bearing Metal Temperature for following (monitoring in DCS)

- a) Turbine front journal Bearing Temperatures.
- b) Turbine rear journal bearing temperatures.
- c) Turbine Thrust Bearing Temperatures (Active & Non active).
- d) All Gear box Bearings temperatures.
- e) Generator front journal Bearing Temperatures
- f) Generator rear journal Bearing Temperatures

3.2 Local pressure Gauges within Battery limits.

3.3 Local Temperature Gauges within battery limits.

3.4 Level gauges for main oil tanks and over head oil tanks.

3.5 Instruments mounted on local gauges board.

3.6 Instruments mounted on Governing console board

-Control oil pressure

- start up oil to ESV Pressure

-Trip oil to ESV Pressure

- HP Secondary oil to HP Governing valve pressure

- LP Secondary oil to LP Governing valves pressure.

- Trip oil Header pressure.

3.7 Primary instruments required for alarms trips and interlocks for STG integral portion (Realised in DCS)

3.8 Transmitters / Temperature elements for Remote Indication and Control for STG integral portion (Realised in DCS)

4. Safety Relief valves for controlled extraction line.

5. Control valves for Turbine Gland sealing steam supply, turbine gland sealing steam dump, Wander Extraction Pressure (2 nos).

6. I/P Converters for all pneumatic control valves.

7. Calibration kit for transmitters.

8. GI instruments air supply lines.

9. Impulse lines along with fittings for instruments in pressure parts.

(J) TG Package Control:

Distributed Digital control system: STG and its auxiliaries including regulating controls, interlocks, operator interface units, interconnection cabling and requisite terminations encompassing the following systems:

1. Turbine controls (for STG and Auxiliaries) comprising of :

a) system cabinets: 1 set of 3 panels – per TG
(Catering to TG integral)

- Electro hydraulic turbine control catering to speed control, load/frequency control, inlet pressure control, extraction pressure control, wanders extraction pressure control.
- Turbine protection, including separate over speed trip (2 of 3).

TECHNICAL CONDITIONS OF CONTRACT (TCC)

- Steam turbine integral interlock and protection.
 - b) Electronic system cabinets : one set of 3 panels – per TG
(Control catering to STG-BOP / regenerative cycle as below)
 - Main steam – flow , pressure, temp monitoring
 - Condenser–Level control, min. recirculation, level alarm
 - CEP Control– 2 nos.CEP Header pressure, temp indications.
 - MP Extraction line & header – flow , pressure ,temp monitoring.
 - LP Extraction line & header – flow, pressure, temp monitoring.
 - MP De-superheater + spray control – 2 nos.
 - LP De-superheater + spry control – 2 nos.
 - Aux steam PRDS – 1 No.
 - Aux steam to GCS , Dearator, steam ejector, gland steam
 - 2. Man Machine Interface : 1 set
(Common for all 2 TG and its auxiliaries)
 - Operator stations: 2 nos.
 - Turbine emergency trip PB: 2 nos.
 - Ethernet switches :1set
 - TCP / IP cables :1 set
- (K)** Instrumentation / cable : 1 set
For TG package comprising
- ST on base instrument to Field JB's.
 - Instrument of ST auxiliaries to field JB's.
 - Field JB's of TG to Electronic system cubicles.
- (L)** Digital Automatic Voltage Regulator for: 1 Set.
(For Brush less excitation of generator (1 auto 1 manual configuration))
- (k) Balance of plant piping & Equipment. :**
1. Turbine Exhaust hood spray piping from terminal point to turbine.
 2. Thermal insulation required for the piping in scope
- (L) Balance of plant Equipment – Mechanical.**
1. COOLING WATER SYSTEM
 - a. Main cooling water pumps with drive motor for condenser.
 - b. Auxiliary cooling water pumps.
 - c. CT make –up water pumps .
 - d. RCC cooling tower mech. erection- Fan assembly with aux, sluice gate assy etc
 2. CONDENSATE SYSTEM
 - a. CEPs – 2 nos for each unit.
 3. MAINTENANCE EQUIPMENT
 - a. Hoist for CW Pumps
-

TECHNICAL CONDITIONS OF CONTRACT (TCC)

4. PIPING

- a. Condensate Piping from hotwell to deareator , condensate recirculation piping to condenser, mainsteam piping from main steam header to turbine emergency stop valve, extraction piping, auxiliary steam piping From Mainsteam header Auxiliary PRDS, AUX.PRDS to boiler, AUX.PRDS to steam piping to GSC, SJAE and Gland seals, Spray water piping, Cooling water piping within pump house and pump outlet to condenser, and return water piping from condenser to inlet of cooling tower. Auxiliary cooling water piping from auxiliary pump outlet to oil cooler, air cooler etc and return piping to inlet of cooling tower.
- b. Piping includes valves and fittings, insulation and supports for BOP + integral piping

(M) Balance of plant Equipment –Electrical

S.no.	Description	Qty
1.	HT(11kV) VCB switchgear consisting of Generator breaker panels ,copper bus bars ; breaker ratings 3000Amps, fault rating 26.24 kA for 1 sec.	2 nos
2	LV (400V) switchgear : STG MCC 400V, 50Hz,50kA for 1 sec cu bus bars with microprocessor based protection relays for incomers in single front modular panels execution	2 set
3	LV (400V) switchgear : BOP MCC 400V, 1250A, 50Hz,50kA for 1 sec cu bus bars with microprocessor based protection relays for incomers in single front modular panels execution for CWP's, compressors, etc BOP load	1 set
4	110V DC System : 110V DC battery system consisting of 110V, 55cells, 400Ah lead acid tubular battery bank and FC + FCBC thyristorised battery charger and other standard battery accessories.	1 set
5	110V DC distribution board with Cu bus bars, 25kA for 1 sec, with MCCB incomers & MCB outgoing feeders in non-draw out fixed type execution, and DC starters for DC ELOP	1 set
6	HT(11kV) Cu conductor XLPE armoured cable with cable kits (Maximum cable distance between Generator & HT	1 set

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	swgr considered 50 mtrs)	
7	Weather Proof sheet steel Local control push button stations with/without ammeters	1 lot
8	LT power 1.1kV, PVC/XLPE insulation, Cu conductor armoured cable & cable accessories	1 set
9	LT control 1.1kV, PVC/FRLS insulation, Cu conductor armoured cables & accessories	1 set
10	Above ground earthing material for equipment grounding (GI strip min 120sqmm)	1 set

(N) Balance of Plant Equipment – Control & instrumentation

S.no	Description	Qty
1.	Pressure, temp, level & flow for monitoring -MS Steam line -Condenser level -CEP discharge header up to Deaerator Hot well inlet -Desuperheater spray water booster line upto desuperheaters -Cooling water line from cooling tower to condenser & return -IP (8 BAR) & LP (2.8 BAR) Extraction line -pressure, temp, flow monitoring	1 lot
2.	Signal ,RTD & Thermocouple cable up to field JB for BOP Scope	1 sets
3	Instrument hook up material for BOP Instruments	1 sets
4	Desuperheaters: - Desuperheater to IP steam extraction (8 bar) - 3 nos - Desuperheater to LP steam process (2.8 bar) - 3 nos	1 lot

TECHNICAL CONDITIONS OF CONTRACT (TCC)

	- Aux steam PRDS – 1 no	
5	Control valve for with pneumatic positioner & I/P converter : 1. Condenser level control- 1 no 2. Condenser min. recirculation – 1 no 3. Steam Pressure control for aux steam for steam ejector, GSC, Deaerator. – 1 no 4. Desuperheater spray control valve – As required	1 sets

Note:

The tentative weight of major equipments is listed below but it may vary due to changes during packing, however there will not be any ODC shipment. The tentative weights are given only for planning purpose that is not having any relation with contract price.

The below weight schedule is annexure-II

TECHNICAL CONDITIONS OF CONTRACT (TCC)

SL	DESCRIPTION	PKG.SIZE(MM)	GR.WT IN MT	REMARK
A	Steam Turbine & Auxiliaries:			
1	Steam turbine	L6015 x B4800 x H4265	73	
2	Bed plate under Exhaust Hood	1350x780x230	4	2 NOS
2	Gear Box	L2000 x B2100 x H2200	11	
B	Oil Supply System Aux,Pumps and other Auxiliaries :			
1	Lube oil tank	L5750 x B2700 x H3200	6.5	
2	Over head tank	2500(Diameter) x H2860	2.5	
3	L.O.P	L2500 x B1200 x H1030	3.4	
4	E.O.P	L2400 x B900 x H656	1.2	
5	J.O.P	L1000 x B800 x H700	0.7	
6	Lub oil Filter	L1700 x B1000 x H2000	0.90	
7	Oil purification Unit	L2000x B2000 xH1700	1.5	
8	Accumulator	L1100 x B500 x H2275	0.6	
9	Governing Console	1300x1300x1800	0.45	
10	Local Gauge Board	1700x1300x1625	0.40	
11	TSI Rack	270x480x470	0.10	
12	Control Valves	1900x570x620	1.34	
13	Safety Relief Valves	1200x350x350	0.75	
A	Surface Condenser:	L8250 x B3160 x H3500	38	
B	Steam Jet Air Ejector:	L6000 x B2000 x H3000	7.1	
C	Gland steam Condenser:	L 2500XB1300XH1200	1.0	
D	ST Oil Cooler :	Dia 700 x L 4500	8.0	
E	Hot well assy& Top connecting Piece, SS Bellow	2880x980x3030	5.5	
F	Generator and Auxiliaries:			
1	Generator package	L7356 x B3100 x H2710	76.3	
2	Air cooler elements (6 nos)	L4200 x B620 x H440	9	9 nos
3	Foundation items	loose items	7	
4	Generator control panel	L1000 x B1000 x H2400	1.5	
5	Generator Relay panel	L1000 x B1000 x H2400	1.5	
6	Bus duct	L6000 x B1400 x H400	15	
7	NGE Cubicle	L1500 x B2500 x H1500	2	
8	PT . SP Cubicle	L2500 x B2000 x H2800	3	

BHEL-PSWR

Tender Specification No: BHE/PW/PUR/TENDHE -TPT/1238

TECHNICAL CONDITIONS OF CONTRACT (TCC)

G. Control & Instrumentation for STG & Integral portion :

SL	DESCRIPTION	PKG.SIZE(MM)	GR.WT IN MT	REMARK
	Pressure Gauges, Temperature Gauges, Pressure switch, differential pressure switch, Thermocouple, RTD, Thermo well, Level Gauges, Level Transmitter, proxymeter, vibration probes etc	1000x800x700	0.50	
	Impulse piping materials	5000x800x600	1.2	
	Pneumatic Erection Material	5000x600x600	0.80	

H) TG Package Control:

Item	Qty	Unit of measure	Dimensions per package					NET WEIGHT (Kgs)	GROSS WEIGHT (Kgs)
			LENGT H(mm)	BREADT H(mm)	HEIGH T(mm)	VOLUM E(CBM)			
DAVR Panel	1	pack age	1350	1450	2500	4.89	1150	1600	
DAVR Panel	1	pack age	1350	1450	2500	4.89	1150	1600	
TG/BOP C&I Panel SUITE:CJJ01	1	pack age	950	1050	2500	2.49	400	700	
TG/BOP C&I Panel CCA01-02	1	pack age	1700	1050	2500	4.46	800	1100	
TG/BOP C&I Panel SUITE:CJJ01	1	pack age	950	1050	2500	2.49	400	700	
TG/BOP C&I Panel CCA01-02	1	pack age	1700	1050	2500	4.46	800	1100	
TG/BOP C&I Panel CRE01-02	1	pack age	1700	1050	2500	4.46	800	1100	
TG/BOP C&I Panel CRE03-05	1	pack age	2500	1050	2500	6.56	1200	1500	
TG/BOP C&I Panel CRE06-07	1	pack age	1700	1050	2500	4.46	800	1100	
TG/BOP C&I Panel CRE01-02	1	pack age	1700	1050	2500	4.46	800	1100	
HMI Panel SUITE:NWPC01	1	pack age	800	1050	2500	2.10	500	1000	
HMI Accessories	1	pack age	900	900	900	0.73	35	91	
Loose items	1	pack age	900	900	900	0.73	200	300	

TECHNICAL CONDITIONS OF CONTRACT (TCC)

TG Cables								
THERMOCOUPLE EXTN CBL 2/2X0.5MM ² IT-3(2000 mtr) CBL PTFE 1.5 SQ MM 30/0.25 600V(500 mtr) PTFE EXTRD 7/0.3 600V 2/2X0.5MM ² IT-(3500 mtr)	1	pack age	135	105	200	0.00284	520	680
THERMOCOUPLE EXTN CBL 2/2X0.5MM ² IT-3(2000 mtr) CBL PTFE 1.5 SQ MM 30/0.25 600V(500 mtr) PTFE EXTRD 7/0.3 600V 2/2X0.5MM ² IT-(3500 mtr)	1	pack age	135	105	200	0.00284	520	680
4 PAIR 1.5sqmm, ARMOURED PVC, CU CABLE(4000 mtr)	4	Drum s	100	780	1000	0.078	400	430
4 PAIR 0.5sqmm, ARMOURED PVC, CU CABLE(16000 mtr)	16	Drum s	900	680	900	0.5508	320	355
CBL FRLS PVC 0.5 SQ.MM(8000 mtr)	8	Drum s	127	70	127	0.00113	825	875

(O) PIPE QUANTITIES (Integral Piping)

4	Piping		Packing size	Weight in MT	
A	Carbon steel piping and fittings		6000x1000x1000	9.0	
B	Alloy steel piping including fittings		6000x1000x1000	0.20	
C	Valves, fasteners, gaskets etc		2000x1000x1000	2.0	
D	Insulation& claddings		1000x1000x800	2.0	
E	Secondary steel structures plates, channel, angles, hangers etc		2000x1000x1000	0.5	
F	Other piping items like flanges, gaskets, strainers, steam traps, bellows etc		1000x1000x800	0.5	
G	SS Piping		6000x1000x600	3.0	
				17.20	

TECHNICAL CONDITIONS OF CONTRACT (TCC)

(P) Balance of plant Equipment – Mechanical:

SL.No	Equipment Description	Qty	Dimension each	Unit Weight each	Total weight
		No	LxBxH (m)	Tons	Tons
1	Cooling water system				
a.	Main cooling water pumps with drive motor for Condenser	6	4.0 x 1.75 x 1.75	3.5	21
b.	Auxiliary cooling water pumps	2	3.5 x 1.5 x 1.25	1.5	3
c.	CT make - up water pumps	2	2.5 x 1.5 x 1.25	1.5	3
e.	RCC Cooling tower with 3 cells	1	60.0 x 20.0 x 14.0	1	20
2	Condensate system				
a.	CEPs -2 nos for each Unit	4	0.6 x 0.6 x 6.0	2	6
3	CW SYSTEM				
A	Hoist for CW pumps	1			5
4	Piping				
A	Carbon steel piping and fittings		6000x1000x1000	305	
B	Alloy steel piping including fittings		6000x1000x1000	48	
C	Valves		2000x1000x1000	35	
D	Hangers		1000x800x800	10	
E	Thermal Insulations		2000x1000x1000	50	
F	Vent silencer		1000x1000x800	2	
G	Secondary steel structures plates, channel, angles etc		2000x1000x1000	20	
H	Other piping items like flanges, gaskets, strainers, steam traps, bellows etc		1000x1000x800	10	
I	Total piping			480	

(Q) Balance of Plant Equipment Electrical:

SL.No	Equipment Description	Qty	Dimension each	Unit Weight each	Total weight
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TECHNICAL CONDITIONS OF CONTRACT (TCC)

		No	LxBxH (m)	Tons	Tons
1	11KV SGR Breaker Panel	1set	2460x2355x2700	1.2	
2	STG MCC	2Set	15260x1254x2460	14.0	
3	BOP MCC	1set	17600x1254x2460	15.0	
4	110V DCDB Battery, battery charger, protection relays	1set	8060x2730x2500	17.0	
5	LT Power Cables	1set	26000mtr	37.0	15nos
6	Control cables	1set	7mtr	7.0	5 Nos
7	Lugs and Glands	1set		0.50	
8	Earthing materials GI Strips	1set	2.7mtr	8.0	
9	Earthing GI Wire	1set	2.1mtr	0.40	
				100MT	

(R) Balance of Plant Equipment – Control & Instrumentation:

SL.No	Equipment Description	Qty	Dimension each	Unit Weight each	Total weight
		No	LxBxH (m)	Tons	Tons
1	Pressure Gauges, Temperature Gauges, Pressure switch, differential pressure switch, Thermocouple, RTD, Thermo well, Level Gauges, Level Transmitter, level switch, Flow transmitters& fittings etc	1000x800x700	0.50	3.0	
2	Impulse piping materials and fittings, 5way manifold , JB's etc	5000x800x600	1.2	3.0	
3	Pneumatic Erection Material GI Pipe and fittings etc	5000x600x600	0.80	1.0	
4	Flow nozzles, Orifice plate assy, control valves, pressure safety valves, Temperature safety valves etc			3.0	
5	Control& Signal Cables, cable glands etc			2.0	
6	Channel, angles, fasteners etc			1.0	
				12.0MT	

NOTE:

Above weights & dimensions are tentative and may vary. All equipments & Aux. are to be handled at port and deliver to site.

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Annexure-III: SUMMARY OF TENTATIVE WEIGHT DETAILS OF
SYSTEMS INVOLVED IN THIS TENDER SPECIFICATIONS FOR BOTH
UNITS

Annexure-III

Summary of Tentative Weight Details of Systems Involved in this Tender Specification for both unit.

WEIGHT DETAILS		
Sl.No.	EQUIPMENT / PACKAGE	APPROX. WT. FOR BOTH UNITS (in MT)
A	Steam Turbine & Auxiliaries:	210
B	Oil Supply System Aux, Pumps and other Auxiliaries :	46
C	Surface Condenser, SS Bellow, Hot well etc	102
D	Integral Piping	44
E	Steam Jet Air Ejector:	15
F	Gland steam Condenser:	2
G	ST Oil Cooler :	16
H	Generator and Auxiliaries:	215
I	STG Air Coolers :	20
J	Control & Instrumentation for STG & Integral portion :	
K	TG Package Control:	45
L	Piping-BOP	480
M	Balance of plant Equipment – Mechanical	70
N	Balance of plant Equipment –Electrical	115
O	Balance of Plant Equipment – Control & instrumentation	20
P	Misc Items, Spares etc	30
	TOTAL	1430
	Rounded of:	1450.00