

## BHARAT HEAVY ELECTRICALS LIMITED PROJECT ENGINEERING MANAGEMENT, NOIDA

Date-27-Nov-24

#### **CORRIGENDUM-06**

PROJECTs	:	KODERMA TPS PH-II (2x800 MW)			
PACKAGE	:	Induced Draft Cooling Towers (IDCT)			
Enquiry No.	:	77/23/6156/MAZ dtd 22.10.2024			
SUBJECT	:	Pre-Bid Replies, Revised PVC sheet			

Type of Corrigendum						
Technical Corrigendum -	<b>V</b>	Commercial Corrigendum -	<b>V</b>			

In reference to the above-mentioned tender enquiry please note the following.

1. Pre-Bid Replies, Revised PVC sheet are attached.

All the other terms and conditions of the tender enquiry remain unchanged. All the bidders are requested to quote accordingly.

Yours faithfully,

For and on behalf of BHEL

Mazhar Wahab Dy. Manager/BOP

						PRE-BID CLARIFICATIONS					
PBQ Set 2 SI No	PBQ Set 1	Corrigendum / Page No.	Section	Reference Chapter / Cl. No	Page No.	Queries	Response from BHEL vide Corrigendum 03 dtd. 16-11-2024	Follow-up / Set-2 queries	Response from BHEL		
51110	31110	1401	Section	Chapter / Cl. No	rage No.	COMMERCIAL					
1	3	Corr-03 / Pg 17 of 21	TenderNotice-8	NIT Cl. 21 (E)	2 of 10	It is a conflict as Bidder does not understand if BHEL will be ready with UNIT CODs as per the Cooling Tower construction plan. Please clarify or add one qualification for waiver of PG Test if front cannot be provided within 6 months from bidder's readiness.	Please follow tender documents.	We request BHEL to respond to this query. Tender documents is silent on this requirement of Bidder.	Please note that tender documents is clear and any new clause shall be not added.		
2	4	Corr-03 / Pg 17 of 21	TenderNotice-8	NIT Cl. 28	(a)	Bidder does not agree to submit any Bank Guarantee on this payment. We shall have to take loan or finance the mobilization in the manner agreed as per Bidder's standard policies. Over that, applicability of additional Bank Guarantee is absolutely unfair and the clause has to be deleted therefore.	Please follow tender documents.	We once againd request BHEL to delete this requirement of submission of additional Bank Guarantee.	Please note that tender documents is clear and no one clause shall be deleted.		
3	5	Corr-03 / Pg 17 of 21	Tender Notice_8	NIT Cl. 28	3 of 10	For a project of this dimension Bidder expects. 10% interest-free advance on Main Supply contract value. Please confirm.  Referring to release of last 10% payment on Main Supply, kindly note that PG test will depend upon the ideal test conditions viz., plant load etc. which is beyond cooling tower contractor's control. Hence Bidder cannot continue to extend the validity of the subject BG till completion of the PG Test, which is not under our control. Therefore, there should be a cut-off period for revalidating the BG. Ideally the PBG should be valid till the warranty period only.	Please follow tender documents.	We request BHEL to re-look into this requirement of Bidder of specifying a cut-off period for re-validating the Bank Guarantee. This is a very practical request from Bidder.	Matter has been delibrated. However, no change in tender documents.		
4	6	Corr-03 / Pg 17 of 21	Tender Notice_8	NIT CI. 28		Bidder expects 10% interest-free advance on E&C contract value. Please confirm.  Referring to release of last 10% payment on E&C, kindly note that PG test will depend upon the ideal test conditions viz., plant load etc. which is beyond cooling tower contractives control. Hence in case PG test / demonstration test of the cooling tower(s) cannot be completed within one year after completion of commissioning of cooling tower(s), for reasons not attributable to the contractor, BHEL shall release payment towards PG Test / demonstration test of the cooling tower(s) against existing performance security, valid till warranty period, that would have been submitted as per NIT Clause No 35 (Page 5 of 11). PLease confirm.	Please follow tender documents.	We request BHEL to accept this requirement of Bidder.	Not possible to accept the same. Please follow tender documents.		
5	10	Corr-03 / Pg 17 of 21	Tender Notice_8	NIT / CI. 35	5 of 10	This is understood to be applicable in case of a composite contract or for E&C package. Please provide PBG validity terms for Supply, Mandatory Spares and Civil packages.	Please follow tender documents.	As per standard BHEL practice, separate contracts are released for Supply, Mandatory Spares and Civil packages. Hence tis query needs to be responded with more clarity. The tender document is silent on the validity terms	Please refer BOP GCC for the same.		
6	13	Corr-03 / Pg 17 of 21	Tender Notice_8	NIT / CL. 38	7 of 10	Please confirm that BOCW Cess, as applicable for civil construction scope of work for cooling tower, has to be borne by cooling tower contractor as per the guiding principles for BOCW Act and the Cess Act.	Please follow tender documents.	Based on the tender documents Bidder is going ahead considering that BOCW Cess shall be borne by BHEL Please confirm.	Please follow tender documents.		
7	20	Corr-03 / Pg 18 of 21	TenderNotice-1	3.1.1.a & b & 3.8.1	5 of 26 8 of 26	Bidder / Contractor objects to the phrase "as per availability within project premises". BHEL to ensure availability within the premises and within 100-150 meters from the site location.	as there are very limited space available for Ph- 2 ,hence it will be as per availibility.	Noted. However Bidder requests BHEL to mark in the plant layout the probable location where limited space may be available.	Point closed.		
8	21	Corr-03 / Pg 18 of 21	TenderNotice-1	3.11.1		Bidder requests BHEL to provide construction power at 2 points per IDCT (one near each IDCT & the other near the batching plant area for each IDCT). Bidder also requests BHEL to provide the distance of point of connection of construction power from each cooling tower.	Construction power will be provided in a single point only.	Noted. However, please confirm that Construction power shall be provided by BHEL at a single point near each cooling tower location within the plant boundary. Also please furnish the distance of the point(s) of connection from each cooling tower.	Point closed.		
9	29	Corr-03 / Pg 18 of 21	Special Conditions of Contract	General	_	Following provisions need to be incorporated in SCC / NIT: (a) Timeline for approval of drawing / documents. (b) Provision of Anape Order should be incorporated. (c) Provision towards extension of time. (d) Formal Contract Agreement format is required for our review & comments, if any. (e) Order of precedence.	(a) bidder to refer Amendment no-1. (b) Please follow tender documents. (c) Please follow tender documents. (d) Please follow tender documents. (e) Already covered in tender document.	St. Nos. b.c,d.e: Kindly furnish the Clause Nos where these points have been clarified in the tender document.	Please refer BOP GCC for the same.		
10	30	Corr-03 / Pg 19 of 21	Tender Notice_3	Price Adjustment - PVC	1 thru' 4 of 4	Price Adjustment Clause / PVC should be applicable for entire duration of contract period, as accepted by BHEL in their recent tenders. Please confirm.  In case of delays for reasons not solely attributable to the bidder / contractor, L3 schedule shall be revised and PVC needs to be calculated and paid based on revised L3 schedule. Please confirm.  In case of negative price variation, payable amount to be restricted to ZERO. Please confirm.  Price Adjustment Formula for Supply and Mandatory Spares should not be limited to Plastic, Steel, Electrical Equipment and Labour components only, Bidder / Contractor should be allowed to furnish the list along with assigned co-efficients for items on which PVC should be applicable.  It is understood that "If the works are executed in an x month, then indices pertaining to that particular x month shall be considered (subscript 1) for calculation irrespective of the month the work has to be completed as per L3 schedule.	Bidder to refer the Amendment no-1.	We once again request BHEL to agree to make the Price Adjustment Clause / PVC applicable for the entire duration of contract period.	Please refer the attachment.		
11	33	Corr-03 / Pg 19 of 21	GCC	GCC CI. 9.0 / Terms of Payment	25 of 86	We understand that the Terms of Payment shall be guided by the NIT document and the GCC provisions shall be applied only if there as some gaps in NIT provisions.	Please follow tender documents.	As order of precedence, we shall consider NIT terms of payment as the predominant criteria and GCC only when the relevant NIT clause is missing / unclear. Please confirm.	Order of precedance given in BOP GCC		
12	37	Corr-03 / Pg 19 of 21	GCC	GCC CI. 10 / Recovery of Outstanding Payment of Other Contracts	30 of 86	Contractor doesn't agree to adjustment of recoveries from any other contract against this contract.	Please follow tender documents.	This stipulation is not acceptable to Bidder. Bidder once again requests BHEL to delete this requirement.	Please note that tender documents is clear and no one clase shall be deleted.		
13	40	Corr-03 / Pg 19 of 21	General Conditions of Contract	GCC BOP - GCTC / Clause No 33.2		Arbitration should be by joint arbitration procedure as per Arbitration & Conciliation Act, 1996 and as amended thereafter. The arbitration shall be conducted by a tribunal of three arbitrators, each party shall appoint one arbitrator, and the two arbitrators so appointed shall appoint the third arbitrator who shall act as the presiding arbitrator. If the two arbitrators fail to agree on the name of the presiding arbitrator, then appointment shall be made as per the provisions of Section 11 of the Arbitration & Conciliation Act, 1996 read with all its subsequent amendments up-to-date. Please confirm	Please follow tender documents.	We request BHEL to agree to joint arbitration procedure as per Arbitration & Conciliation Act, 1996.	Not possible. Please follow tender documents.		

	PRE-BID CLARIFICATIONS								
		Corrigendum / Page		Reference		Queries	Response from BHEL vide Corrigendum 03	Follow-up / Set-2 queries	Response from BHEL
SI No	SI No	No.	Section	Chapter / Cl. No	Page No.	Quenes	dtd. 16-11-2024	rollow-up/ Set-2 queries	Kesponse nom brice
			Technical Specification			TECHNICAL	Instruments mentioned at cl no 47.4 are		
14	47	Corr-03 / Pg 20 of 21	No. PE-TS-519-165-W001 (Tender Notice 6)	Scope of Supply and services / Clause 47.2	14 of 195	Please confirm that Bidder's scope of instruments for the subject project is limited to the instruments mentioned in Clause No 47.4 only. No other field instruments is in Bidder's scope.	minimum requirement. Bidder has to supply any other instrument required as per contract and as per system requirement.	Response is not clear. Kindly clarify Bidder's detailed scope for instruments.	Bidder to follow technical specification.
								Your response regarding PG Test procedure is noted.	
15	48	Corr-03 / Pg 20 of 21	Technical Specification No. PE-TS-519-165-W001 (Tender Notice 6)	Scope of Supply and services / Clause 47.5	14 of 195	All instruments for PG testing, in line with specification as applicable, shall be supplied on returnable basis and will remain testing agency's property. PG test instruments will be taken back by the testing agency after completion of the PG tests. No new PG test instruments need to be supplied by bidder. Please confirm accpetance.	Scope of instruments for PG test shall be as per CT PG Test Procedure.	However, kindly note that as per standard practice, all instruments (as per CTI test code ATC-105 / specified procedure) required during PG testing shall be brought to site by testing agency on returnable basis and shall therein remain the agency's property. Please confirm.	Noted. However, same shall be subject to DVC approval during detailed engineering.
16	49	Corr-03 / Pg 20 of 21	Technical Specification No. PE-TS-519-165-W001 (Tender Notice 6)	Clause no. 47.15 / Annual Maintenance Service	15 of 195	Regarding AMS for Profibus instruments, we requesdt BHEL to delete this requirement from cooling tower bidder / contractor's scope.	Please refer Amendment -1.	Noted as deleted from Bidder's scope.	
17	51	Corr-03 / Pg 20 of 21	Technical Specification No. PE-TS-519-165-W001 (Tender Notice 6)	Technical Data - Part A (Mechanical) SI No 2.17	18 of 195	Minimum elevation of hot water distribution duct w.r.t. Basin Curb Level shall be left to the bidder to decide / optimise. Kindly confirm.	Bidder to follow technical specification.	Based on Amendment-1, Bidder requests BHEL to review their response and allow Bidder to optimise their selection by deleting this requirement of maintaining the minimum elevation of hot water distribution duct w.r.t. Basin Curb Level as 13.0 M. In this context also kindly note that based on latext. Amendment-1, and maintaining this minimum elevation in case of a cooling tower with trickle grid type fill is completely impractical.  Please confirm.	Bidder's requested is reviewed. Bidder to follow technical specification.
18	59	Corr-03 / Pg 20 of 21	Technical Specification No. PE-TS-519-165-W001 (Tender Notice 7)	Clause No 5.6	6 of 161	This stipulation is not acceptable to Bidder. BHEL / Owner should take responsibility for the correctness of the geo-technical investigation report. Nature of soil, type of foundation, soil bearing capacity, sub-soil water, etc. should be considered by Bidder for estimation purpose based on available geo-technical investigation report only. However, any price & for time implication due to change in the actual soil profile, if encountered by Bidder / Contractor during execution stage, should be borne by BHEL / Owner. Please conform.	Bidder to follow technical specification.	Response is not acceptable to Bidder. BHEL/Owner should take responsibility for the correctness of the geo-technical investigation report enclosed with te specification.	Bidder is once again requested to follow technical specification, in line with previous executed / ongoing projects.
19	64	Corr-03 / Pg 21 of 21	Technical Specification No. PE-TS-519-165-W001 (Tender Notice 7)	3.01.01	141 of 161	This stipulation is not acceptable to Bidder. BHEL / Owner should take responsibility for the correctness of the geo-technical investigation report provided along with tender. Onus of correct assessment / interprepation and understanding of provided geore-technical investigation report / bore log data is Bidder's responsibility but the correctness of the data given by BHEL / Owner as part of the tender document has to be ensured by BHEL / Owner only. Any price &/or time implication due to change in the actual soil profile, if encountered by Bidder / Contractor during execution stage, should be borne by BHEL / Owner. Please confirm.		Response is not acceptable to Bidder. The geo-technical investigation report enclosed with te specification is the only document based on which a Bidder has to adopt the accurate foundation system for the coolign towers and hence BHEL / Owner should take responsibility for the correctness of the available soil report of cooling towers' location.	Bidder is once again requested to follow technical specification, in line with previous executed / ongoing projects.
20	67	Corrigendum-03 / Pg 21 of 21	Technical Specification No. PE-TS-519-165-W001 (Tender Notice 7)	General	-	Pirease confirm that dismantling & disposal of existing over-ground as well as underground facilities, if applicable within Bidder's scope limit, is BHEL's responsibility prior to handing over of the cooling tower site to Bidder / Contractor.	Osmantling & disposal of existing over-ground as well as underground facilities coming within IDCT area (if applicable) will be in Bidder's scope. Further, Earth work in stripping of top soil upto a maximum depth of 0.30 m below ground level so as to exclude all debris, grass, vegestation, bushes, trees having girth upto 300mm including roots and organic materials etc for leveling and grading including dressing, assential fallaces. Be aradies and commerciate	Noted. However, Bidder requests BHEL to furnish the underground scanning report.	Underground scanning report is not available. If required, bidder to prepare the same or asses the existing underground facilities (if any) by visiting site.
21	-	Corrigendum-03 / Amendment No 1 / Pg 3 of 21	SI No 3	Maximum CW Pumping head permissible		-	_	Value as per original specification was 15.5 MWC w.r.t. FGL and NOT 16 MWC, i.e. as per revised figure reduction allowed is only 0.5 MWC and NOT 1.0 MWC. Kindly review and confirm.	Noted and confirmed.
22		Corrigendum-03 / Amendment No 1 / Pg 3 of 21	SI No 5	Maximum limit on total power consumption per cooling tower for the cooling tower fans at fan motor inlet terminals		-	-	Value as per original specification was 2800 KW and NOT 2600 KW, i.e. as per revised figure increase allowed in fan power at motor input terminals due to Amendment-1 is 200 KW and NOT 400 KW. Kindly review and confirm.	Noted and confirmed.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
1.	Annexure – II  CLIMATOLOGICAL DATA  TECHNICAL  SPECIFICATIONS (Book 1 of 2)	Source: IMD Station at Tilaya (1956 to 1978).	The footnote below the climatological data says that the source is IMD Station at Tilaya and the data collected is for the period from 1956 to 1978.  Kindly note that the time period is half a century ago and hence, the data is not valid for 2024. Hence, it will be necessary for BHEL to collect the climatological data from 2019 to 2024 (current data of at least five years) and analyze the same for WBT and DBT/RH to be able to specify the design ambient WBT and DBT/RH accurately. This is necessary because the WBTs have gone up because of climate change and it becomes necessary to know the actual ambient WBT in the present-day conditions.	Bidder to follow technical specification.
2.	Clause No. 47.15.4  TECHNICAL SPECIFICATIONS (Book 1 of 2)	47.15.4 The services under Post Warranty Maintenance Agreement, shall broadly comprise of the following:	Please confirm that the AMS contract clause is not applicable to this tender as there is no software to be supplied as part of the IDCT package.	Please refer Amendment no-1.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
3.	Clause No 2.8  TECHNICAL DATA - PART - A (MECHANICAL)  TECHNICAL SPECIFICATIONS (Book 1 of 2)	Recirculation allowance – 0.8 Deg C	The recirculation allowance mentioned is 0.8 deg C. The basis of this recirculation allowance is not given in the specifications and hence, it is assumed that this allowance is more of a tradition than being a result of any calculation.  BHEL is aware of the CTI bulletin PFM-110 that is mentioned in the Indian Standard BIS 18758 (design guidelines for IDCTs) for estimating the recirculation allowance. The actual recirculation allowance for this IDCT as per PFM-110 works out to 0.91 Deg C as against 0.8 Deg C specified in the tender. Hence, please confirm that the recirculation allowance must be 0.91oC as per PFM-110 recommended in BIS 18758.	Bidder to follow technical specification.

Clause No. 10.3

4.

Clause No. 5.17.01 (k)

# TECHNICAL SPECIFICATIONS (Book 2 of 2)

**10.3** All concrete surfaces subject tow water/water spray/moist air except exterior surface shall be applied with high build heavy duty polyurethane coating having formulation of 100 % solids, solvent free over proper cleaned and complete dried surface. Thickness of polyurethane coating shall be 2.0mm.

#### 5.17.01(k) Coating -

All concrete surfaces in direct contact with water/ water spray/moist air shall applied be with Moisture Compatible Resistant Corrosion Coating System or its equivalent as specified in Annexure-G. All concrete surfaces subject to water/ water spray/moist air upto including and

The painting specifications at the above two clauses are contradictory. However, we find that Clause 5.17.01 (k) supersedes Clause 10.3 as per Amendment No.5 in Tech Specs (Book 2 of 2).

We further find that the painting specifications for exterior surfaces of the RCC cooling towers have also been amended. However, Annexure-G being referred to is not available in the tender document. Presently, Annexure-G is related to Fire Extinguishers. Please check and provide us with Annexure-G related to high performance moisture compatible corrosion resistance coating system.

All concrete surfaces subject to water /water spray/moist air including cold water basin, inner faces of peripheral walls, all faces of cell partition wall, all faces of columns, all faces of beams (both cat in situ and precast), bottom surface of fan deck slab for counter flow tower and both surface of fandeck slab for cross flow tower, inner face of fanstack, all faces of hot water basin (for cross flow tower), etc. except exterior surface shall be applied with High build heavy duty polyurethane coating having formulation of 100 % solids, solvent free over proper cleaned and complete dried concrete surface. Thickness of polyurethane coating shall be 2.0 mm. Suitable primer as per practice/manufactures' standard recommendation shall be used. The detailed specification of polyurethane coating is given in ANNEXURE-I.

Exterior surfaces of cooling tower shall be coated with one coat of High performance moisture compatible corrosion resistant coating system of minimum 150 micron as per Annexure-G(of attached document) followed by finish coat two pack aliphatic Isocyanate cured acrylic finish paint (solid by volume minimum 55% ± 2%) with Gloss retention (SSPC Paint Spec No 36, ASTM D 4587, D 2244, D 523)

Fan Deck slab level including basin slab, inner faces of peripheral walls, faces of cell partition wall, all faces of columns, all faces of beams (both cast in situ and precast), bottom surface of fandeck slab for counter flow tower and both surface of fandeck flow slab for cross tower, inner face of fanstack, all faces of hot water basin (for cross flow tower), etc as applicable shall receive the said coating after cleaning and drying of the concrete surface. The detailed specification of the coating system on concrete surfaces is given Annexure-G. in surfaces of External Cooling tower peripheral walls and fanstack shall be painted with two or more coats of waterproof

of level 2 (after minimum 1000 hours exposure, Gloss loss less than 30 and colour change less than 2.0  $\Delta$ E) and minimum 70 micron DFT.

Annexure-G related to high performance moisture compatible corrosion resistance coating system is attached Annexure-G.



SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
		cement paint of approved shade, make and color.		
5.	Clause No.3.2.1 (b), (c)  ADDITIONAL NIT DOCS	Construction Power-  (b) Further distribution for the work to be done which include supply of materials and execution — Bidder's scope  (c) Distribution of Electricity for the office, stores, canteen, of the bidder which include supply of materials and execution — Bidder's scope.	We request you to provide uninterrupted supply of construction power within 50m at one point near IDCT's, 50m at one point near fabrication yard, 50m at one point near batching plant. Connections should be provided with handing over of work front to Bidder.  Please specify if fix monthly charges to be paid for construction power.	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
6.	Clause No.3.3.1 (a), (b)  ADDITIONAL NIT DOCS	(a) Making the water available at single point – Bidder's scope  (b) Further distribution as per the requirement of work including supply of materials and execution – Bidder's scope	We request you to provide uninterrupted supply of Water for construction within 50m of IDCT's Site, Fabrication yard, Batching Plant & in Labor Colony (Free of cost).	Please follow the tender documents.
7.	Clause No.3.9.1  ADDITIONAL NIT DOCS	BHEL shall not provide any space or residential accommodation to the contractor for his staff or labour and the contractor has to make his own arrangements at his cost	We request BHEL to provide staff living accommodation on free of cost basis.	Please follow the tender documents.

SI. I	lo. Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
8.	Clause No.3.9.1  ADDITIONAL NIT DOCS	BHEL shall not provide any space or residential accommodation to the contractor for his staff or labour and the contractor has to make his own arrangements at his cost. Labour colony is to be developed by bidder for all the labourers required to be deployed for the works. Bidder has to identify the land for labour colony at their cost and no land will be given by BHEL for labour colony purpose. The contractor to develop/construct labour colony/hutment fulfilling the minimum requirements as specified in the "HSE Plan for Site Operations by Subcontractors" enclosed along with this tender as well as meeting the	We request BHEL to provide Land for labour colony on free of cost basis with free water and power.	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
9.	Clause No. 28 NIT	Payment Terms for Civil works shall be as follows:- (ii) Ten percent (10%) of contract value of civil works along with taxes (as applicable) shall be released by Site authorities/ Region on successful completion of PG/ Demonstration test(s) and handing over system/package to Customer/BHEL, as applicable.	We request to not hold Ten percent (10%) of contract value of civil works along with taxes (as applicable) shall be released by Site authorities/ Region on successful completion of PG/ Demonstration test(s) and handing over system/package to Customer/BHEL, as applicable against submission Equivalent Bank Guarantee before 1st RA bill	Please follow the tender documents.
10.	Clause no. 9.5  GCC - BOP (Rev No. 00) wef 14/08/2024	Vendors shall submit billing documents for payment directly to BHEL. Payment will be released within 60 days after submission of complete documents as per clause no 9.6.2 9.6.5 below or as per order/contract (45 days for vendors qualified and registered as Micro or Small as per MSMED Act).	We request you to release the payment within 30 days as we are medium enterprises as per MSMED Act.	Please follow the tender documents (Clause no 28 of NIT regarding payment terms).

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
11.	Clause no. 16.2.1 Corrigendum -1 GCC - BOP (Rev No. 00) wef 14/08/2024	a) LD on mandatory spares - Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages if dispatch/delivery of the mandatory spares is delayed beyond the contractual completion date or extension thereof as per the period stipulated in the Order/ Contract and not by way of penalty, a sum equivalent to half (½) percent of the total contract price (mandatory spares) per week or part thereof, limited of ten (10) percent of the total contract price (mandatory spares) excluding GST	a) LD on mandatory spares - Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages if dispatch/delivery of the mandatory spares is delayed beyond the contractual completion date or extension thereof as per the period stipulated in the Order/ Contract and not by way of penalty, a sum equivalent to half (½) percent of the total contract price (mandatory spares) per week or part thereof, limited of <i>Five (5) percent</i> of the total contract price (mandatory spares) excluding GST	Please follow the tender documents.

Please revise clause: (b1) LD on Supply-**(b1) LD on Supply**- Purchaser reserves Purchaser reserves the right the right to recover from the Seller/ to recover from the Seller/ Contractor, as agreed liquidated damages if Contractor, as agreed dispatch/delivery of the package (Main liquidated damages if supply) is delayed beyond the contractual dispatch/delivery of the completion date or extension package (Main supply) is thereof as per the period stipulated in the delayed beyond the Order/ Contract and not by way of penalty, contractual completion date a sum equivalent to half (1/2) percent of the or extension total contract price (main supply) per week thereof as per the period or part thereof, limited of *five (5) percent* stipulated in the Order/ of the total contract price (main supply) Contract and not by way of excluding GST. penalty, a sum equivalent to half (1/2) percent of the total Clause no. 16.2.1 Corrigendum -1 contract price (main (b2) LD on E&C- Purchaser reserves the 12. Please follow the tender documents. supply) per week or part right to recover from the Seller/ Contractor, GCC - BOP (Rev No. 00) wef thereof, limited of ten (10) as agreed liquidated damages if E&C 14/08/2024 percent of the total contract completion of the package is delayed price (main supply) beyond the contractual completion date or excluding GST. extension thereof as per the period stipulated in the Order/ Contract and not by way of penalty, a sum equivalent to half (b2) LD on E&C-(½) percent of the total contract price Purchaser reserves the right (supply+ E&C) per week or part thereof, to recover from the Seller/ limited to *five (5) percent* of the total Contractor, as agreed contract price (supply +E&C) excluding liquidated damages if E&C GST. completion of the package However, total LD for delay in supply and is delayed beyond the E&C shall be limited to **5%** of total contract contractual completion date price (supply + E&C) excluding GST or extension thereof as per the period stipulated in the

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
		Order/ Contract and not by way of penalty, a sum equivalent to half (½) percent of the total contract price (supply+ E&C) per week or part thereof, limited to ten (10) percent of the total contract price (supply+E&C) excluding GST.		
		However, total LD for delay in supply and E&C shall be limited to 10% of total contract price (supply + E&C) excluding GST		
13.	Clause no. 16.2.1 Corrigendum -1 GCC - BOP (Rev No. 00) wef 14/08/2024	(c) LD on service portion (PG test, O&M, AMC, etc.) where delivery for services are defined separately in the NIT. LD shall be applicable @ ½ percent of the total service portion contract value per week or part thereof limited to ten (10) percent of the total contract value of service portion excluding GST.	Please revise clause:  (c) LD on service portion (PG test, O&M, AMC, etc.) where delivery for services are defined separately in the NIT. LD shall be applicable @ ½ percent of the total service portion contract value per week or part thereof limited to <i>five</i> (5) percent of the total contract value of service portion excluding GST.  Maximum aggregate liability on account of LD on Mandatory Spares, Supply, E&C, Service Portion, PG Test, O&M, AMC etc will be 10% of executed Contract Value.	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
14.	Clause no. 30.1  GCC - BOP (Rev No. 00) wef 14/08/2024	Force Majeure event means an event beyond the control of the parties to the contract including but not limited to war, Military operations of any nature, Act of God, earthquakes, floods, fire, quarantine restrictions, acts of public enemy, blockades, civil war, explosion, epidemics, insurgency, change in law or government policy etc.	Please include pandemic and endemic also in Force Majeure event.	Please follow the tender documents.
15.	Clause no. 30.3  GCC - BOP (Rev No. 00) wef 14/08/2024	If it is agreed between the parties that a Force Majeure event has occurred and its effect continues for a period of 36 months, then either party shall be free to cancel the contract. However, if the effect of such event ceases within this period of 36 months, the performance of the obligations put on hold shall be resumed immediately.	Please change the clause to "If it is agreed between the parties that a Force Majeure event has occurred and its effect continues for a period of <b>3 months</b> , then either party shall be free to cancel the contract. However, if the effect of such event ceases within this period of 3 months, the performance of the obligations put on hold shall be resumed immediately."	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
16.	Clause no. 10.0  GCC - BOP (Rev No. 00) wef 14/08/2024	RECOVERY OF OUTSTANDING AMOUNT ii. Dues payable to Seller against other contracts including SDs, BGs in the same Region/Unit/Division of BHEL. iii. Dues payable to Seller against other contracts including SDs, BGs in the different Region/Unit/Division of BHEL.	Please delete these clauses. This contract has to be treated independent of other contracts.	Please follow the tender documents.
17.	ANNEXURE-VII GCC - BOP (Rev No. 00) wef 14/08/2024	A) PAYMENT TERMS Payment will be released generally within 60 days after receipt of material/services and complete documents as per order/contract (45 days for vendors qualified and registered as micro or small as per MSMED Act) Loading will be done for vendors seeking earlier payment w.r.t. above, for the value and the period of deviation as per Clause 17.0 of 'Instructions to Bidders'.	We request you to release the payment within 30 days as we are medium enterprises as per MSMED Act.	Please follow the tender documents (Clause no 28 of NIT regarding payment terms).

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
18.	ANNEXURE-III  GCC - BOP (Rev No. 00) wef 14/08/2024	CONTRACT PERFORMANCE BANK GUARANTEE	The Contract Performance Bank Guarantee format will be vetted by Bidder Bank before issue of CPBG.	Bidder to follow tender specification.
19.	PRE- QUALIFYING REQUIREMENTS (TECHNICAL)	4.3.3 The Bidder who has independently constructed RCC cooling towers can also participate along with its Holding company / Subsidiary / Collaborator / Associate who in turn meets the requirements of clause 4.3.1 above	Please delete this clause.  The bidder who has experience of Cooling Tower can design, supply & construct all types of CT's with any MOC.	Bidder to follow tender specification.
20.	T&P List Additional NIT Docs	T&P List  Automatic Concrete  Batching Plant (60 Cum/Hr.)  (with printing facility & DG back up) with three Nos. of Silos of 100  MT capacity each – 2 Nos	Please revise clause  Automatic Concrete Batching Plant (30 Cum/Hr.) (with printing facility & DG back up) with three Nos. of Silos of 100 MT capacity each – 2 Nos	Please follow the tender documents.

SI. No	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
21.	Additional NIT Docs	BANK GUARANTEE FOR EMD	The Bank Guarantee format for EMD will be vetted by Bidder Bank before issue of BG.	Please follow the tender documents.

22.	Clause no. 33.2  GCC - BOP (Rev No. 00) wef 14/08/2024	ARBITRATIONExcept as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity of execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the contract, then, either Party may, by a notice in terms of Section 21 of Arbitration & Conciliation Act in writing to the other Party commence arbitration. The notice shall as far as possible contain the particulars of all claims to be referred to arbitration.  The arbitration shall be conducted by Sole Arbitrator to be appointed mutually by the Competent Authority of BHEL (purchaser) & Seller within the statutory period as applicable. As far as practicable, names of 2 or	The number of arbitrators shall be three. Each party shall appoint their Arbitrator and the two appointed Arbitrators shall thereafter appoint the Presiding arbitrator. The work being construction related, it is agreed to appoint construction domain experienced Arbitrator to enable better understanding of the issues and early disposal of the issues. The place of arbitration shall be New Delhi. New Delhi law shall apply	Please follow the tender documents.
		as applicable. As far as		

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
		seeking consent of the Seller to one of the names proposed for appointment as arbitrator in the case. If the parties fail to agree on the name of Sole Arbitrator, then appointment shall be made as per the provisions of section 11 of the Arbitration & Conciliation Act		

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
23.	Clause no. 39.0  GCC - BOP (Rev No. 00) wef 14/08/2024	HOLD ON CONTRACT EXECUTION CASES OTHER THAN FORCE MAJEURE In case of uncertainty regarding lifting of HOLD on contract execution relating to any activity put by Buyer/BHEL (because of any reason other than Force Majeure) or by end customer (cancellation or hold on project), the contract/Purchase Order may be short closed by Buyer/BHEL after 3 years from date of imposition of HOLD without prejudice to any claim of either party with regard to the executed portion of the contract. However, all future obligations of the Buyer and Seller with respect to the contract/Purchase Order shall come to end in case of such short closure.	Please change the clause to "In case of uncertainty regarding lifting of HOLD on contract execution relating to any activity put by Buyer/BHEL (because of any reason other than Force Majeure) or by end customer (cancellation or hold on project), the contract/Purchase Order may be short closed by Buyer/BHEL after <i>6 (six) months</i> from date of imposition of HOLD without prejudice to any claim of either party with regard to the executed portion of the contract. However, all future obligations of the Buyer and Seller with respect to the contract/Purchase Order shall come to end in case of such short closure."	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
24.	Clause no. 46 (iv)  GCC - BOP (Rev No. 00) wef 14/08/2024	The rate of interest applicable for the above advances shall be the base rate of State Bank of India prevailing on the date of release of advance plus 6%, and such rate will remain fixed till the total advance amount is recovered.	Please change the clause to "The rate of interest applicable for the above advances shall be the base rate of State Bank of India prevailing on the date of release of advance plus 2%, and such rate will remain fixed till the total advance amount is recovered.	Please follow the tender documents.
25.	Clause no. 1  ANNEXURE-V  GCC - BOP (Rev No. 00) wef 14/08/2024	(RISK AND COST CLAUSE)  BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor after due notice of a period of 14 days' by BHEL in any of the following cases	Please change the clause to "BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor after due notice of a period of <b>30 days'</b> by BHEL in any of the following cases"	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
26.	Clause no. 1.1  ANNEXURE-V  GCC - BOP (Rev No. 00) wef 14/08/2024	Risk & Cost Amount against Balance Work: Risk & Cost Amount against Balance Work shall be calculated as follows: Risk & cost amount = [(A-B) + (A x H/100)] Where, A = Value of Balance scope of work (*) as per rates of new contract B = Value of Balance scope of work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e., inclusive of PVC & ORC, if any. H = Overhead Factor to be taken as 5  In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).	Please revise: Risk & Cost Amount against Balance Work shall be calculated as follows: Risk & cost amount = [B + H/100] Where, A = Value of Balance scope of work (*) as per rates of new contract B = Value of Balance scope of work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e., inclusive of PVC & ORC, if any. H = Overhead Factor to be taken as 5	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
27.	Clause no. 2  ANNEXURE-V  GCC - BOP (Rev No. 00) wef 14/08/2024	Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor Without prejudice to the other means of recovery of such dues from the seller recoveries from the seller on whom risk & cost has been invoked shall be made from the following: b) Dues payable to the seller against other contracts, SDs, BGs in the same Region/Unit/ Division of BHEL. c) Dues payable to the seller against different contracts, SDs, BGs in the same Region/Unit/ Division of BHEL	Please delete these clauses. This contract has to be treated independent of other contracts.	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
28.	ANNEXURE-VII GCC - BOP (Rev No. 00) wef 14/08/2024	C) LIQUIDATED DAMAGES If maximum limit asked for is on Undelivered portion – 10% value of the total quoted ex works price & freight (excluding GST). If maximum limit asked for is less than 10% of contract value loading shall be to the extent to which not agreed by bidder (at offered value).	We request you to change maximum Liquidated damages to be <b>5%</b> of the contract value.	Please follow the tender documents.
29.	Clause no. 8 ANNEXURE-XII GCC - BOP (Rev No. 00) wef 14/08/2024	8. COOLING TOWER-IDCT - Final bill shall be paid after successful PG test completion.	Please revise clause:  Final bill to be released after successful completion of IDCT. BHEL will be having the Performance Bank Guarantee which may be released after successful PG test or Defect Liability Period.	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
30.	Clause no. 12.4  GCC - BOP (Rev No. 00) wef 14/08/2024	Decision of Purchaser with regard to Seller/ Contractor's liability and the amount involved, if any, payable by Seller/ Contractor under the guarantee shall be final, conclusive and binding.  This shall not be applicable on the recoveries arising out of Risk and Cost, recoveries made by Customer from BHEL on account of Contractor, any other type of recoveries for workmanship, material, T&P etc. due from the contractor.	Please revise the clause as below: Any decision of Purchaser which the Seller/Contractor does not agree with shall be, at the Seller's discretion, submitted to the dispute resolution mechanism, i.e. the Purchaser's decision shall not be final, conclusive and binding Maximum liability specified herein to be applicable to the whole contract, not just in relation to the Guarantee as per clause 12 maximum aggregate liability on all allowed will be limited to 10% of executed contract value. Please insert the following: Neither party shall be liable to the other, under any legal or equitable theory of recovery or otherwise by law, including for liability arising by way of indemnity, in contract or in tort (including negligence) or otherwise, for any special, exemplary, punitive, moral, and/or indirect or consequential loss or damage whatsoever, or for any loss of profit or revenue, loss of production, loss of use of the works (or part thereof), loss of any contract, or any claims for any type of loss or damage of a type referred in this section under any contract with a third party and which arises as a result of the other party's breach of this Contract.	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
31.	Clause no. 14.1  GCC - BOP (Rev No. 00) wef 14/08/2024	Purchaser's nominated Inspection Agency shall have at all reasonable times access to Seller/ Contractor's premises or works and shall have the power at all reasonable times to inspect drawings of any portion of the work or examine the materials and workmanship of the plant/ equipment/ stores during their manufacture, and if part of the plant/ equipment/ stores is manufactured at other premises, the Seller/ Contractor shall arrange for inspection, examination and testing by the Inspection Agency as if the plant/ equipment/ stores is manufactured on the Seller/ Contractor's premises.	Please add the following wording at the end of the clause: Notwithstanding the above, such inspection shall be subject to the following: (i) the Purchaser shall give the Seller reasonable prior notice of its intention to inspect. (ii) inspection shall only take place during normal business hours. (iii) the Purchaser shall comply with the Seller health and safety guidelines. (iv) the Purchaser shall not delay and/or disrupt the Seller nor issue any instruction to the Seller during any such inspection, and(v) the Purchaser will be accompanied by a member of the Seller's personnel at all times during the inspection.	Please follow the tender documents.
32.	Clause no. 16  GCC - BOP (Rev No. 00) wef 14/08/2024	DELIVERY FAILURE AND TERMINATION / LIQUIDATED DAMAGES	Please add following: These liquidated damages shall be the only damages due from the Seller for delay and shall be the Seller's sole liability and the Purchaser's sole remedy for delay,	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
33.	Clause no. 31.0  GCC - BOP (Rev No. 00) wef 14/08/2024	Seller/ Contractor shall fully indemnify and keep indemnified the Purchaser against all claims /losses/damages/demands/ expenses of any nature of whatsoever nature arising during the course and out of the execution of this Order/ Contract on in connection of this contract.	Please add the following wording to the clause: "to the extent that such claims /losses/damages/demands/expenses arise solely and exclusively our of or by reason of the Seller's performance of its obligations under the contract and is attributable to negligent acts or omissions of the Seller, its personnel, officers, agents or subcontractors."	Please follow the tender documents.
34.	Clause no. 32.3  GCC - BOP (Rev No. 00) wef 14/08/2024	Seller/ Contractor shall continue to perform the order/ contract, pending settlement of dispute(s).	Please add the following wording to the clause: "unless the dispute is related to non-payment by the Purchase to the Seller in which case the Seller, at its discretion, shall be entitled to suspend performance of the order/contract"	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
35.	Clause no. 43  GCC - BOP (Rev No. 00) wef 14/08/2024	a) If the completion of work as detailed in the scope of work gets delayed beyond the contract/ completion period, the seller/ contractor shall request for an extension of the contract and BHEL at its discretion may extend the contract as per procedure prescribed in clause 43.0 (b), (c) & (d).	Please add the following wording at the end of clause: *Notwithstanding the foregoing, Seller shall be entitled to an extension of the time for completion if and to the extent that it is or will be delayed in the progress and/or completion of the works or of a portion thereof by the dates stated in the schedule and/or the achievement of the time for completion by any of the following causes: (i) as a result of an error or fault found in the information and documentation provided by Purchaser, (ii) any delay, impediment or prevention caused by or attributable to Purchaser, its personnel or representatives or other contractors, if any, performing works at the same site, (iii) any change in law affecting the works, (iv) Force Majeure in accordance with clause 30, or (v) a cause of delay giving an entitlement to extension of time under this Contract.	Please follow the tender documents.
36.	Clause no. 44  GCC - BOP (Rev No. 00) wef 14/08/2024	OVER RUN CHARGES: OVER RUN CHARGES (Only for E&C contract): - This shall be applicable only for Erection and commissioning (E&C) contract:	OVER RUN CHARGES should be applicable on complete package.  Total Over Run Compensation shall be limited to 20% of the cumulatively executed contract value till the Month.	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
37.	Clause no. 4.2  GCC - BOP (Rev No. 00) wef 14/08/2024	OTHER TAXES & LEVIES All taxes/ duties/ Cess / seignior age fee other than GST shall be deemed to be included in the Ex-Works prices.	BOCW cess to be provided extra.  Please also clarify about new taxes.	Please follow the tender documents.
38.	Clause no. 17 SCC NIT	In case of foreign vendors, quoted prices & Dispatches shall be on C & F Port - Mumbai Basis and Taxes & Duties in the country of dispatch shall be borne by Foreign vendor.	We understand that upcoming project enjoy Mega Power Plant status. Please confirm if custom duties are exempted for import of Cooling Towers fills, etc. Please also confirm custom duties are exempted for import of construction equipment like tower crane and other equipment.	Please follow the tender documents.
39.	Clause no. 5.2  GCC - BOP (Rev No. 00) wef 14/08/2024	STAUATORY VARIATION No other variations such as on Custom Duty, exchange rate, minimum wages, prices of controlled commodities, any other input etc. shall be payable by the purchaser unless specifically agreed upon.	The revision in minimum wages and price impact due to minimum wages should be compensated.	Please follow the tender documents.
40.	Clause no. 12 Section A HEALTH, SAFETY AND ENVIRONMENT PLAN	HSE PENALTY	These penalties are very stiff. Please decrease the amount by 50%.	Please follow the tender documents.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
41.	PRICE ADJUSTMENT-PVC payment terms & conditions	The total amount of PVC payable shall not exceed 10% of the BASIC contract value for respective order.	We request you to increase the limit of PVC to 25%.	Bidder to follow tender specification.
42.	PRICE ADJUSTMENT-PVC payment terms & conditions	C. PRICE VARIATION COMPENSATION FOR CIVIL WORK PORTION F = Fixed portion of the contract price which will not be subjected to any adjustment under this formula or otherwise which will be 0.20.	We request you to change the fixed portion to 0.10.	Bidder to follow tender specification.
43.	Clause no. 51.5  TECHNICAL SPECIFICATIONS (Book 1 of 2)	GENERAL TECHNICAL REQUIREMENT 51 BID EVALUATION CRITERIA 51.5 No benefit will be given to Bidder, in case of reduction in actual quantity of Cement and reinforcement steel with respect to the quantities considered in bid evaluation.	Benefit should be given to Bidder, in case of reduction in actual quantity of Cement & reinforcement steel with respect to the respective quantities considered in bid evaluation.	Bidder to follow tender specification.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
44.	Clause no. 15 Scope of Supply and Services TECHNICAL SPECIFICATIONS (Book 1 of 2)	DETAILED SCOPE:- 14- Carrying out performance test of one of the Cooling Tower through CTI (Cooling Technology Institute-USA)/ DVC approved/listed testing agency. Carrying out performance test of balance cooling towers by the contractor himself or by experienced reputed third party following the same procedure as approved for testing by CTI agency	Please clarify whether the performance tests on the IDCT should be conducted by external CTI approved agencies or Indian third party agencies like IITs or the contractor himself. This is because there are big costs associated with external agencies. And as per the Atmanirbhar Bharat policy of GOI, Indian agencies must be encouraged as they are equally capable and easily accessible.	Bidder to follow tender specification.
45.	Clause no. 1.3 Technical Data – Part A (Mechanical) TECHNICAL SPECIFICATIONS (Book 1 of 2)	1.3) Specification for Water Cooling Towers – BS 4485	The IDCT civil design for RCC members/structures shall be carried out at per applicable IS codes. No British codes are applicable for IDCT civil/structural designs.	Bidder to follow tender specification.
46.	Clause no. 3  SCOPE OF WORKS  TECHNICAL SPECIFICATIONS (Book 2 of 2)	Bidder shall also submit all drawings in Auto Cad format along with PDF files.	Bidder shall submit all drawings in PDF format only.	Bidder to follow tender specification.

SI. No.	Reference Clause of Tender Document	Existing Provision	Bidder's Query/ Deviations requested	BHEL reply
47.	Clause No. 4.5 CIVIL TECHNICAL REQUIREMENTS TECHNICAL SPECIFICATIONS (Book 2 of 2)	The applicability of the provisions for conformity to the various codes and standards stipulated shall be in the following order: 4.5.1 Bureau of Indian Standards 4.5.2 British Standards Institution	The IDCT civil design for RCC members/structures shall be carried out at per applicable IS codes. No British codes are applicable for IDCT civil/structural designs.	Bidder to follow tender specification.
48.	Clause No. 4.27 TECHNICAL DATA- PART A (MECHANICAL) TECHNICAL SPECIFICATIONS (Book 1 of 2)	4.27- Bolts, Buts & Other Hardware- <b>SS 316</b>	Please clarify it is <b>Nuts.</b>	Bidder to follow tender specification.
49.	Clause No- 3  ELECTRICAL SCOPE BETWEEN BHEL AND VENDOR  TECHNICAL SPECIFICATIONS (Book 1 of 2)	Power Cables, Control Cables and Screened Control Cables for a) Both end equipment is in BHEL's scope b) Both end equipment is in vendor's scope c) One end equipment in vendor's scope	The scope split mentions only power and control cables; there is no mention of instrument cables.  Please clarify whether instrument cables will be supplied by BHEL.	Supply of instrument cable (screen control cables) is in BHEL scope. Please also refer cl no. 47.13 of General technical requirement.

CLAUSE NO.					SIEITA DVC
		TECHNICAL REQU	JIREMEN	TS	
D-1-12(G)	ANNEXURE -G				
	Specification For High Performance Moisture Compatible Corrosion Resistant Coating System  a)Providing & applying High Performance Moisture Compatible Corrosion Resistant Coating System manufactured as per technical specifications of Central Electrochemical Research Institute, Karaikudi, (C.S.I.R. affiliate Institute), Tamil Nadu, Pin - 630 006.  b) The coating system shall be water compatible, compatible for applying in wet conditions also and shall be tolerant to under-prepared surfaces and existing residual tar / paint. The system shall also be quick curing so as to be suitable for application during shut downs.  The coating material shall be stored in the manner as per recommendations of the manufacturer until ready for use. The coating material shall be used within the manufacturer's written recommended shelf life.				
	c) The coating system shall conform to the following:  PROPERTIES OF PAINT    High Performance Moisture Compatible   Corrosion Resistant Coating System CECRI   know-how system				
	Volume So	lids	70%		
		Specific Gravity (ASTM-D-1475) 1.25 ± 0		1	
	Dry Film Th	nickness (ASTM-D-	160 ± 10	60 ± 10 μm per coat	
	1186) Coverage		4 - 4.5 sc	ı.m/ ltr	
	Touch Dry		2 Hours		
	Recoating		24 Hours		
	RMAL POWER STATION	TECHNICAL SPECIFI		SUB SECTION D-1-12(G)	PAGE
PHASE	RMAL POWER STATION -II (2 X 800 MW) C PACKAGE	TECHNICAL SPECIFI SECTION-VI, PAR		SUB SECTION D-1-12(G) High Performance Moisture Compatible Corrosion Resistant Coating System	PAGE 1 OF 2

### **CLAUSE NO. TECHNICAL REQUIREMENTS** PROPERTIES OF COATING Salt Spray (ASTM-B 117) 2000 Hours **Passes** Resistance to sea water (Carried out upto 6 months) $10^9\,\Omega.\ cm^2$ Coating Resistance (Carried out upto 6 months) Adhesion (ASTM-D 4541) 4.5 N/mm Sq Flexibility (ASTM-D-522) 1/8" passes 33% Elongation Impact (ASTM G 14-04) 45 cm passes d) Paint material & its application method shall be obtained from any manufacturer who has been granted License by CECRI, Karaikudi for technical know how for High Performance Moisture Compatible Corrosion Resistant Coating System. The application method of coating shall be got duly approved from CECRI, Karaikudi. **KODERMA THERMAL POWER STATION TECHNICAL SPECIFICATION** SUB SECTION D-1-12(G) PAGE **High Performance Moisture** 2 OF 2 PHASE-II (2 X 800 MW) SECTION-VI, PART-B Compatible Corrosion **EPC PACKAGE Resistant Coating System**

#### PRICE ADJUSTEMENT-PVC payment terms and conditions

The price adjustment provisions shall be applicable separately for **EACH ORDER** price components relating to Supply of Equipment/Mandatory spare, Civil and E&C Works, as per price break-up furnished by the Contractor in price schedule.

Price adjustment amounts towards aforesaid components of Contract Price shall be paid in the respective currencies of Contract(INR).

Vendor shall submit L2 schedule along with BID and detailed L3 schedule after award of work. PVC payment shall be linked to approval of L3 schedule.

The Contract price shall be subject to price variations during execution of the Contract to reflect changes in the cost of labour and material components etc. in accordance with the provisions described below:

(Note-The total amount of PVC payable shall not exceed 10 % of the BASIC contract value for respective order. Negative price variation (without any limit) shall be passed on to BHEL.)

#### A) PRICE ADJUSTMENT FORMULA FOR SUPPLY AND MANDATORY SPARES -

The amount of price adjustment towards variable portion payable/recoverable on each shipment/despatch shall be computed as under:

EC = EC1 - EC0

EC1 will be computed as follows:

EC1= EC0 {F + 
$$\underline{a} \times A_1 / A_0$$
 + Lb  $\times L_1 / L_0$ }

Above formula, is further expressed as follow considering all component.

EC1= EC0 {F +a x 
$$(0.45 \times AP_{1}/AP_{0} + 0.35 \times AS_{1}/AS_{0} + 0.2 \times AE_{1}/AE_{0} + Lb \times L_{1}/L_{0}}$$

#### Where

- EC = Adjustment to Ex-Works supply and mandatory spare Price Component expressed in the currency of The Contract (INR) payable to the contractor for each shipment/despatch.
- EC1 = Adjusted Amount of Ex-Works supply and mandatory spare Price Component expressed in the currency of the Contract (INR) payable to the Contractor for each shipment/despatch.
- EC0 = Ex-Works supply and mandatory spares Price expressed in the currency of the Contract (INR), shipment/despatch wise.
  - "F" shall be fixed portion of the Ex-Works Component of the Contract and shall be considered as 0.15.
  - "a" shall be co-efficient of major materials/items involved in the Ex-Works Component of the Contract Price and shall be considered as 0.5.

- 'AP, AS, AE', shall be published price indices of corresponding major materials/items. For this purpose, indices available for Plastics, Steel and Electrical equipment, based RBI bulletin Whole Price Index (https://www.rbi.org.in/Scripts/BS\_ViewBulletin.aspx?Id=22884).

and

'L' shall be per Other consumer price index number for industrial workers (All India Monthly Average) as published (<a href="https://www.rbi.org.in/Scripts/BS\_ViewBulletin.aspx?Id=22882">https://www.rbi.org.in/Scripts/BS\_ViewBulletin.aspx?Id=22882</a>)

#### Price Indices to be considered (As per RBI)

Material	RBI Index
Plastics-AP	Table No 21, Sl.no 1.3.12.3
Steel -AS	Table No 21,Sl.no 1.3.14.3
Electrical equipment - AE	Table No 21, Sl.no 1.3.17
Industrial labour -L	Table No. 19, Sl. no.1

- 'Lb" shall be co-efficient for labour component in the Ex-Works Component of the Contract Price which shall be considered as 0.35.

For the indices, subscript '0' refers to indices of the month immediate after expiry of contractual delivery period.

Subscript '1' refers to indices as on month before actual delivery date/month of Shipment / despatch.

#### B) PRICE VARIATION COMPENSATION FOR ERECTION & COMMISSIONING

1. Formula for calculation of price variation:

ER = ER1-ER0

ER1 will be computed as follows ER1= ER0 (0.15 + 0.85 L1/L0)

Where,

ER = Adjustment to Erection & commissioning component of contract price expressed in the currency of contract (INR) payable to the contractor for each billing.

ER1 = Adjusted amount of Erection & commissioning component of contract price expressed in the currency of contract (INR) at the time of billing to the Contractor.

ER0 = Value of the Erection & commissioning work in INR done.

L: Labour indices shall be Other consumer price index number for industrial workers (All India Monthly Average) as published by Labour Bureau, RBI.

(https://www.rbi.org.in/Scripts/BS ViewBulletin.aspx?Id=22882)

For the indices, subscript '0' refers to indices of the month immediate after expiry of contractual completion period.

Subscript '1' refers to indices as on month of execution of E&C work.

#### Price Indices to be considered (As per RBI)

Material	RBI Index
Industrial labour	Table No. 19, Sl. no.1

#### C) PRICE VARIATION COMPENSATION FOR CIVIL WORK PORTION

1. Formula for calculation of Price variation for civil works:

CV = CV1 - CV0

CV1 will be computed as follows:

 $CV1 = CV0 (F + m \times M1/M0 + d \times D1/D0 + s \times S1/S0 + Lb \times L1/L0)$ 

Where,

CV = Adjustment to civil works Price component in the currency of (INR) of the contract payable to the contractor for the work done.

CV1 = Adjusted amount of Civil Works Price Component of contract price (INR)

CV0 = Value of Civil Works executed in billing period (INR)

F = Fixed portion of the contract price which will not be subjected to any adjustment under this formula or otherwise which will be **0.20**.

m = Coefficient of material (excluding cement & reinforcement steel) content in the cost of civil portion of the work which will be **0.30**.

d = Coefficient of High Speed Diesel Oil content in the cost of civil portion of the work which will be **0.05.** 

s = Coefficient of structural steel content in the cost of civil portion of work which will be **0.05** 

Lb = Coefficient of labour (for all categories) content in the cost of civil portion of the work which will be **0.40** 

The component in civil work formula shall be taken from Indices published by GOI and RBI from monthly basis. Details mentioned below.

- "M "and "D" shall be published price indices of corresponding major materials/items. For this purpose, indices available for Material index under head of " all commodities" and HSD based on office of economic adviser, GOI, Whole Price Index (All India Monthly Average) as published on ( <a href="https://eaindustry.nic.in/display\_data\_201112.asp">https://eaindustry.nic.in/display\_data\_201112.asp</a>) (path to be followed Whole price Index (WPI) --- WPI press release.)
- "S" shall be published price indices of corresponding major materials/items. For this purpose, indices available for Steel, other non-metallic mineral product, based on RBI bulletin Whole Price Index (https://www.rbi.org.in/Scripts/BS\_ViewBulletin.aspx?Id=22884).

and

- 'L' shall be per Other consumer price index number for industrial workers (All India Monthly Average) as published (https://www.rbi.org.in/Scripts/BS\_ViewBulletin.aspx?Id=22882)

#### Price Indices to be considered (As per RBI / Office of Economic adviser, GOI)

Material	Office of Economic adviser Index
Material Index " All commodities" M	Annexure -III, Sl.no 1
HSD -D	Annexure –III, Fuel & power Sl. no.3
Material	RBI Index
Mild Steel Long product - S	Table No 21, Sl.no 1.3.14.4
Industrial labour - L	Table No. 19, Sl. no.1

For the indices, subscript '0' refers to indices of the month immediate after expiry of contractual completion period.

Subscript '1' refers to indices as on month of execution of civil work.