

**CONTENTS**

<b>CLAUSE NO</b>	<b>DESCRIPTION</b>
<b>1.0</b>	<b>PROJECT SYNOPSIS AND GENERAL INFORMATION</b>
<b>2.0</b>	<b>SCOPE OF THE CONTRACT</b>
<b>3.0</b>	<b>SITE VISIT</b>
<b>4.0</b>	<b>TOOLS &amp; PLANTS</b>
<b>5.0</b>	<b>MATERIAL HANDLING-ISSUE OF STEEL &amp; OTHER MATERIALS-RECONCILIATION</b>
<b>6.0</b>	<b>INSPECTION, TESTING AND INSPECTION CERTIFICATES</b>
<b>7.0</b>	<b>INSURANCE</b>
<b>8.0</b>	<b>DEVIATIONS/ CLARIFICATIONS</b>
<b>9.0</b>	<b>DEWATERING</b>
<b>10.0</b>	<b>TIME SCHEDULE/ COMPLETION PERIOD</b>
<b>11.0</b>	<b>PRICE BID &amp; CONTRACT PRICE</b>
<b>12.0</b>	<b>TERMS OF PAYMENT</b>
<b>13.0</b>	<b>DELETED</b>
<b>14.0</b>	<b>TAXES AND DUTIES</b>
<b>15.0</b>	<b>PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT</b>
<b>16.0</b>	<b>QUALITY CONTROL &amp; QUALITY ASSURANCE</b>
<b>17.0</b>	<b>QUALITY ASSURANCE PROGRAMME</b>
<b>18.0</b>	<b>GENERAL REQUIREMENTS – QUALITY ASSURANCE</b>
<b>19.0</b>	<b>HEALTH, SAFETY &amp; ENVIRONMENT</b>
<b>20.0</b>	<b>SPECIFIC REQUIREMENTS FOR ISO 9002</b>
<b>21.0</b>	<b>INTEREST BEARING RECOVERABLE ADVANCE/ MOBILISATION ADVANCE</b>
<b>22.0</b>	<b>OVER RUN CHARGES</b>
<b>23.0</b>	<b>REVISION ON ACCEPTED CONTRACT RATE</b>
<b>24.0</b>	<b>PRICE VARIATION CLAUSE/ ESCALATION</b>
<b>25.0</b>	<b>LIQUIDATED DAMAGE</b>
<b>26.0</b>	<b>GUARANTEE / WARRANTY</b>
<b>27.0</b>	<b>EXTENSION OF TIME FOR COMPLETION</b>
<b>28.0</b>	<b>EARNEST MONEY DEPOSIT (EMD), SECURITY DEPOSIT (SD) AND PERFORMANCE BOND (PB)</b>
<b>29.0</b>	<b>CERTIFICATE TOWARDS COMPLETION</b>
<b>30.0</b>	<b>CIVIL LABORATORY</b>
<b>31.0</b>	<b>CONSTRUCTION SCHEDULE</b>
<b>32.0</b>	<b>PAYMENT FOR ADDITIONAL/EXTRA ITEMS FOR CIVIL FOUNDATION WORKS</b>
<b>33.0</b>	<b>Deleted</b>
<b>34.0</b>	<b>TOOLS &amp; PLANTS (TO BE PROVIDED BY CONTRACTOR)</b>
<b>35.0</b>	<b>OTHER TERMS</b>

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 2 OF 36

<b>1.0</b>	<b>PROJECT SYNOPSIS AND GENERAL INFORMATION</b>
1.1	<p>The 2 x 660 MW MAITREE SUPER THERMAL POWER PROJECT is located in Moithara Village, Rampal Upazila, Bagerhat District, Bangladesh.</p> <p>The Bidder shall acquaint himself by a visit to the site, with the conditions prevailing at site before submission of the bid. The information given here in under is for general guidance and shall not be contractually binding on the Owner. All relevant site data / information as may be necessary shall have to be obtained / collected by the Bidder.</p>
1.2	<b>APPROACH TO SITE</b>
	<p>The nearest town Khulna is at a distance of 23 km from project site. The site is Connected by road from Mangla- Khulna Highway.</p> <p>Nearest Domestic airport is Jessor, Bangladesh at a distance of about 93 KM and international airport is Dhaka at a distance of 263 KM, Bangladesh</p>
1.3	<b>Owner: BIFPCL (BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (PVT.) LIMITED)</b>
<b>2.0</b>	<b>SCOPE OF THE CONTRACT</b>
2.1	The work to be done under this specification comprises of Balance Civil, Structural, horizontal & vertical GRP-flue can & Mitre Bend erection works as per BOQ of Price Schedule , Architectural & Other Incidental Works All Complete of 275m High Twin Flue GRP Lined Chimney at Maitree Site.
2.2	<p>Broad scope of work for this contract is specified below in the major heads: -</p> <ol style="list-style-type: none"> <li>1) Transportation, handling, shifting, Erection, fixing for completion of balance horizontal &amp; vertical GRP Flue Liners &amp; Mitre Bend along with handing over of system in complete in Chimney. Lamination/Flue Can Jointing &amp; Technical assistance regarding GRP Flue Cans &amp; condensate system shall be provided by M/s CPP.</li> <li>2) Supporting structure for vertical Flue Can erection.</li> <li>3) Balance Concreting &amp; allied works.</li> <li>4) External Painting works in chimney</li> <li>5) Balance Structural works in chimney</li> <li>6) Completion of all balance misc. works required for completion of Chimney job.</li> </ol>
2.2.1	For some of the activities partial civil/structural/GRP Liner works is executed by other vendor and hence balance work as per drawings / specifications is to be executed.
2.2.2	All the major balance works to meet the project requirement have been included in the scope. Bidder may also require to execute miscellaneous works also not covered in the list but necessary to meet the project requirement within the rates quoted as per BOQ cum Price Schedule. Such works shall be taken up as per direction of BHEL in writing. Rate quoted by bidder as per price schedule shall be inclusive of such similar works.
2.3	All necessary parts, and works necessary for transport, storage and erection purposes. Handling & proper Storage of all materials supplied by M/s CPP shall be in the scope of the bidder.
2.4	The Bidder shall furnish all labour, materials, tools and equipment necessary for the completion of the scope as indicated and specified herein.
2.5	The Work shall include everything requisite and necessary to finish the Work properly, notwithstanding that every item of labour or materials or accessories required to make the installation complete may not be specifically mentioned.

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 3 OF 36
2.6	The works to be performed under this contract consist of providing all labour, supervision, material, scaffolding, construction equipment's, tools and plants, temporary works, transportation and all incidental items not shown or specified but reasonably implied or necessary for the proper completion of work in all respects. Testing of all materials, concrete, earthwork other allied works, preparation of bar bending schedules on the basis of construction drawings.	
2.7	The area of work shall be cleared of all vegetation, rubbish and other objectionable matter and materials remove, shall be burnt or otherwise disposed of as directed by the Engineer-in-Charge.  No separate payment for these operations shall be made. The cost of all these operations shall be deemed to have been included in the unit rates rendered for the different items under bill of quantities.	
2.8	All the works areas shall be adequately flood lighted to the satisfaction of the Engineer-in-Charge when the work is in progress during the night shifts.	
2.9	The unit rates shall include all material equipment, fixtures, labour construction plant, temporary works and everything whether of permanent or temporary nature necessary for the completion of job in all respects.	
2.10	The unit rates for various items of B.O.Q shall include all the stipulations mentioned in Section C and technical specifications under Section D and nothing extra over B.O.Q rates shall be payable.	
2.11	Drawings showing enough details for the construction as per the specification shall be furnished to the contractor in a phased manner as far as possible.	
2.12	The bidder should fully apprise himself of the prevailing conditions at the proposed site, climatic conditions including monsoon pattern, local conditions, soil strata and site specific parameters and shall include for all such conditions and contingent measures in the bid, including those which may have not been specifically brought out in the specifications.	
<b>3.0</b>	<b>SITE VISIT</b>	
3.1	Contractor should visit site and acquire full knowledge & information about site conditions prevailing at site and in and around the plant premises together with all the statutory, obligatory, mandatory requirements of various authorities before submission of the bid. <b>In line with the above, site visit confirmation will be required to be submitted by the bidder with the technical bid.</b>	
3.1	<b>OPEN SPACE FOR OFFICE &amp; STORAGE</b>	
3.1.1	Open spaces for material storage yard & construction of temporary site office may be allocated as made available by the customer / BHEL free. Contractor has to make his own arrangements for labour colony including Electricity and water for the labour colony.	
3.1.2	Construction of necessary stores and storage of materials shall be in contractor's scope. BHEL shall provide available space as received from customer on mutually agreed basis. Security of stores & work place shall be in Contractor's scope.	
3.1.3	<b>REMOVAL OF TEMPORARY FACILITIES</b> When the Work is completed all such temporary structures and facilities shall be removed from the Site and the area shall be restored to its original condition	
3.2	<b>WATER</b>	
3.2.1	On readiness of the Construction water system from start of work), BHEL will provide construction water at one point at mutually agreed point or within 500 m from work premises, free of cost to the contractor.	

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 4 OF 36

	Bidder to note that no ground water is allowed for construction purpose by the project authority.
3.2.2	Further necessary network for construction water system shall be done by the bidder at his own cost.
3.2.3	Contractor should arrange on their own, drinking water in their labour colony.
3.2.4	BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of water supply and the contractor shall claim no compensation for delay in work for such interruption. Contractor may make standby arrangement for water for which no separate payment shall be made by BHEL.
3.2.5	Contractor will have to arrange for storage of water to meet the day-to-day requirement. Bidder will ensure adequate supply of construction water to meet the requirement of water during major concreting.
3.2.6	The availability of water (construction as well as drinking) in Maitree project may be limited. Contractor shall ensure that no water is wasted. In this regard the contractor shall take all necessary measure towards preservation of water.
3.3	<b>ELECTRICITY</b>
3.3.1	<p><b>CONSTRUCTION POWER &amp; GENERAL ILLUMINATION NETWORK:-</b></p> <p>The Construction Power will be free for construction purpose only, however in case any power cut bidder has to arrange uninterrupted power supply through DG. No extra payment will be admissible for DG supply. The quoted rate is inclusive of it.</p> <p>The bidder will have to procure &amp; install adequate area illumination system during construction right from start of his work. This system will include temporary pole lighting, portable lighting towers with sufficient DG back-up for area lighting at different working areas for execution of the work &amp; safety of workmen within the quoted rate.</p> <p>The illumination should be such that minimum illumination requirement as specified in specification or any-where for general illumination is maintained.</p>
3.3.2	The bidder shall have to provide earth leakage circuit breaker at each point wherever human operated electrical drives / T&Ps are deployed.
3.3.3	The power supply will be from the available source of customer. BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of power supply / variation in voltage level and no compensation for delay in work can be claimed by the contractor due to such non-supply on the grounds of idle labour, machinery or any other grounds.
3.3.4	Bidder will have to arrange sufficient illumination at their own work areas.
3.3.5	The contractor should ensure that the work in critical areas is not held up in the event of power breakdown. In the event of breakdown in the electric supply, if the progress of work is hampered, it will be the responsibility of the contractor to step up the progress of work after restoration of electric supply so that overall progress of work is not affected.
3.3.6	The contractor shall have to make arrangement at their own cost for illumination that will be required in the working area for execution of the work & safety of workmen.
3.3.7	The contractor shall have to make arrangement at their own cost for illumination etc. in labor colony. However there may be provision of Chargeable Power for labor colony for which contractor has to install meters and necessary accessories
4.0	<b>TOOLS &amp; PLANTS</b>

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 5 OF 36
4.1	All the tools and plants required for execution of the above work as per Clause No-34.4 are in contractor's scope except 250T crane which shall be provided by BHEL during fabrication & erection of horizontal duct in position.	
<b>5.0</b>	<b>MATERIAL HANDLING-ISSUE OF STEEL &amp; OTHER MATERIALS-RECONCILIATION</b>	
<b>5.1</b>	<b>MATERIAL HANDLING (BHEL ISSUED MATERIAL)</b>	
5.1.1	<p>Reinforcement (TMT bar), earthing GI Strip &amp; Clamp, structural steel (MS plate/ ISMB/ channel/ angle/chequered plate/ stainless steel plate/liner), RMC only will be issued free of cost by BHEL for use in the work covered in this contract. All other materials required for proper completion of job shall be provided by contractor and quoted rates shall be inclusive of this.</p> <p>Please note that BHEL will only issue the above free materials if has written in the description of the BOQ.</p>	
5.1.2	Consignment of steel & other materials will be directly issued to the contractor as received by BHEL, on weighment basis from its supplier, as per delivery challan of supplier.	
5.1.3	Handling of steel and other materials of total project including its unloading will be in vendor's scope for which no separate payment will be given by BHEL.	
5.1.4	It would be the responsibility of the contractor to keep in constant contact with BHEL / site to find out the delivery status, arrival of the consignments and arrange for escort to accompany the truck / trailer for transportation of above materials by BHEL's supplier, as necessary. The lorry, truck way bill for the consignment as shall be received by BHEL would be handed over to the contractor immediately for unloading of materials including all arrangement for necessary gate passes etc. All arrangement for necessary gate passes etc. shall be the responsibility of contractor.	
5.1.5	Payment of all demurrages that may result due to contractor's fault / delay would be the responsibility of the contractor. If BHEL have to make payment of demurrage together with freight, the amount so paid as demurrages for the reasons stated above, shall be recovered from the bills of the contractor. The decision of BHEL's engineer in this regard will be final and binding on the contractor. However the contractor has to clear all such charges, if any in this regard and complete the job without waiting for BHEL's decision.	
5.1.6	It would be the responsibility of the contractor to sign on the delivery book acknowledgement slip of supplier/ transport authorities etc.	
5.1.7	Consignments coming on Fridays and holidays are also required to be handled / unloaded by the contractor. Since the offices and stores will probably remain closed on such days, it will be the responsibility of the contractor to contact BHEL engineers at their residence and obtain instructions.	
5.1.8	Since the consignments are expected to arrive during any time of the day or night, contractor shall have, his workmen round the clock at site as well as other places as required to unload the materials immediately on arrival.	
5.1.9	Unloading of materials at the storage yard or at places designated by BHEL, stacking & restacking, shifting & re-shifting, using contractor's own cranes, trailers and other equipment's with the valid road permit for their operation, unloading and stacking etc. shall be responsibility of the contractor under this contract. All materials / equipment's shall be stacked, stored above ground level by use of concrete or wooden sleepers. No materials shall remain on ground at any time. All concrete sleepers required for stacking the materials shall be arranged by contractor (successful bidder of this package). All other material handling equipment's like winches, d-shackles, slings of	

	various sizes, max puller, pulley blocks, jacks, trucks, tailors etc. required for such material handling of steel etc. shall be arranged by contractor within quoted / accepted rates.
5.1.10	It will be the responsibility of the contractor to submit computerized account of all such consignments of materials received by them, daily to BHEL.
5.1.11	BHEL reserve the right to recover from the contractor any loss arising out of damage / theft or any other causes of the materials issued to him at any point.
5.1.12	<p>Open land (very limited space) for storage shall be provided by BHEL on free of cost basis as per availability.</p> <p>You shall make complete arrangement of necessary security personnel, to safeguard all such materials in your custody. Materials issued will be used only for construction of permanent work. You shall take care of material issued by BHEL and shall protect the same from theft, damage and weathering.</p> <p>Barbed wire fencing of the steel storage yard, batching plant area, reinforcement bending yard area etc. are to be done by the contractor at his own cost. Contractor shall also remove grass, bushes, trees etc. wherever required off the land provided to him and shall make proper continuous up-keepment of the open yard / land by removing grass, bushes trees etc. and same is included under the scope of his work &amp; no extra payment shall be made to the contractor in this regard.</p>
5.1.13	DELETED
5.1.14	The contractor shall in no case be entitled for any compensation or damages on account of any delay in supply or non-supply thereof for all or any such material.
5.1.15	No material shall be issued to the contractor except as those indicated above, i.e. steel unless otherwise expressly provided for in the contract. Contractor will have to make his own arrangement at his own cost for procurement of any other material as required for the works and of such quality as acceptable to BHEL.
5.1.16	The contractor shall maintain proper store account for all the BHEL issued materials and shall give three copies of monthly computerized reconciliation statement of such account to the BHEL.
5.1.17	Contractor shall carry out in complete association with BHEL, material management functions and execution like day to day update of materials, issued to contractor, accounting for surplus/ scrap material returned etc. These functions shall also be carried out through computerized system utilizing suitable software. Contractor shall provide experienced software personnel to associate on dedicated basis for efficient discharge of the same.
5.1.18	The contractor shall solely be responsible for the safety & quality of material after it is handed over and issued to contractor by BHEL.
5.1.19	BHEL issued materials shall not under any circumstances be taken out of the project site unless otherwise permitted by BHEL.
5.1.20	All the necessary lifting tackles, cranes, hydra, tools & plants including tractors, trailers, trucks, pulley blocks, jacks, winches, wire ropes etc. of suitable capacities and other equipment's incidental to carry out this work shall have to be arranged by the contractor at his cost. BHEL engineer reserves the right to inspect lifting tackles and equipment before allowing their use. Such approval however shall not relieve the responsibility of the contractor to ensure safe handling of equipment taking the precautions to avoid any accident and damage to other equipment and personnel.
5.1.21	No separate rate will be applicable for the above job. The contractor will quote the rate for the items inclusive of all charges for the above job.

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 7 OF 36
5.1.22	Bidder's scope of handling of steel under the scope of this tender includes stacking/ storing of materials over concrete sleepers. Bidder scope shall include provision of concrete sleepers for this purpose and no separate payment against the same will be made by BHEL. After completion of the job bidder shall take back the sleepers. Bidder's quoted rate/ price shall be in consideration to this.	
<b>5.2</b>	<b>Deleted</b>	
<b>5.3</b>	<b>ISSUE OF STEEL</b> (Steel shall be provided against respective items of the BOQ where mentioned that Steel shall be supplied by BHEL as free of cost)	
5.3.1	The steel shall be issued to the contractor free of cost on the following basis.	
5.3.1.1	Structural steel (MS plate, angle, channel, ISMB, Stainless steel plate / Liner, chequered plate and EOT crane rails) – Weighment basis (unit – MT).	
5.3.1.2	Reinforcement steel (TMT) and MS rod (MS round) – Weighment basis (unit – MT).	
5.3.2	All the steel (structural steel, reinforcement, earthing strip / bar) issued by BHEL shall be properly accounted for. The total quantity of steel required for the work will be calculated from the approved Bar Bending schedule, fabrication drawings, approved laps, chairs and lugs. The measurement for payment as well as for accounting shall be based on the sectional weights	
5.3.3	In case any such sectional weights are not available in the above documents, the manufacturer recommendation shall be binding.	
5.3.4	The steel issued to the contractor shall be mainly in standard length and sections as received from the supplier. However, the contractor shall be bound to accept the steel in length as available in the project stores no claims for extra payment because of issue of non-standard length will be entertained.	
5.3.5	In case MS flats as required in the fabrication of structures are not available, you shall cut such width out of the available MS plates to make flats at no extra cost till such material is available and procured by BHEL.	
5.3.6	The contractor shall satisfy himself of the quality and quantity of the materials at the time of taking delivery from BHEL stores. No claims whatsoever will be entertained by BHEL because of quality or quantity after the materials are taken by contractor from BHEL stores.	
<b>5.4</b>	<b>ISSUE OF READY MIX DESIGN(RMC)</b>	
5.4.1	The RMC shall be issued to the contractor free of cost as per item of the Price Schedule.	
<b>5.5</b>	<b>Quarterly requirement of steel</b> must be positively submitted by the contractor at the last month of the previous quarter.  In addition, the contractor shall also furnish the estimated requirement of cement and steel during a month by the third week of the previous month indicating his requirement.	
5.6	Bidders to ensure that no lamination materials are taken over by them from BHEL. Fabrication wastage, if any due to above, shall not be compensated by BHEL.	
5.7	Bidder to note that all fasteners like MS/ HT/ HSFG bolts/ nuts, lock nuts, washers etc. shall be supplied by the contractor as per applicable item of Price Schedule.	
5.8	Bidder to note that cement and steel required for his enabling job like store / site office etc. shall be arranged at his own cost.	
<b>5.9</b>	<b>RETURN OF MATERIALS</b>	
5.9.1	<b>RETURN OF STEEL INCLUDING SCRAP</b>	
5.9.1.1	All surplus steel and all wastage materials will be taken back on weighment basis.	

5.9.1.2	Surplus, unused and un-tampered steel shall be sorted section-wise and returned separately for a place directed by BHEL/ engineer within the project area. Return of such materials will not be entitled to any handling and incidental charges.		
5.9.1.3	All wastage / scrap (including wastage, unusable scrap) shall be returned to the stores on weightment basis and a receipt obtained for material accounting purposes. Return of such material will not be entitled to any additional cost due to handling and transportation and incidental charge.		
5.9.1.4	Scrap for reinforcement steel and structural steel shall be returned separately		
5.9.2	READY MIX CONCRETE (RMC) WASTAGE		
5.9.2.1	Allowable wastage – One and half (+1.5%) of theoretical consumption of RMC unless specified otherwise in the technical specification.		
5.9.2.2	For any material issued by BHEL to the contractor free of cost, and which is not accounted for by the contractor to BHEL, then recovery for such material shall be affected at penal rates.		
	SL	RMC consumption	Basis of issue & penal recovery
	C-1	Theoretical consumption (without considering any wastage or loss).	Free
	C-2	Actual consumption being Limited to plus one and half percent (+1.5%) of aforesaid theoretical consumption towards allowable wastage.	Free
	C-3	Actual consumption beyond one and half percent (+1.5%) of above (C-1).	Penal rate
5.9.3	REINFORCEMENT STEEL & EARTHING MS ROUND CONSUMPTION		
5.9.3.1	The theoretical consumption of various diameters of reinforcement and earthing MS round shall be based on approved construction drawing and bar bending schedule. Weight shall be calculated considering the sectional weights as per Indian standards. No extra cost shall be payable to the contractor for any deviation in weights for the different procedures adopted for issue and calculation of the theoretical consumption including rolling tolerances.		
5.9.3.2	Actual consumption = Issue – Surplus.		
5.9.3.3	Surplus = Un-tampered and unused quantity of steel returned by the contractor to BHEL store along-with relevant documents. However, cut pieces of length greater than or equal to 5.0 m in good condition as per judgment of the engineer will also be treated as surplus steel. If contractor will be deposited/handed over to BHEL more than wastage quantity as specified in clause No. 5.10.1 & 5.12.1 then same quantity will not be taken in Reconciliation statement and bidder will not be received of any financial benefit.		
5.9.3.4	Wastage = Actual consumption – Theoretical consumption.		
5.10	REINFORCEMENT STEEL WASTAGE		
5.10.1	Allowable wastage – Three Percent (+3%) of the theoretical consumption shall be considered as allowable wastage.		
5.10.2	Wastage and scrap shall be as per actual weightment basis.		
	SL	Reinforcement steel & earthing rod 40 mm MS round	Basis of issue & penal recovery
	R-1	Theoretical consumption (without considering wastage and scrap or loss)	Free
	R-2	Wastage limited to plus three percent (+3%) of aforesaid theoretical consumption (R-1) towards allowable wastage.	Free



	R-3	Wastage beyond three percent (+3%) of the theoretical consumption above (R-1).	Penal rate
5.11	<b>STRUCTURAL STEEL CONSUMPTION</b>		
5.11.1	The theoretical consumption of various sections shall be based on approved drawings. Weights shall be calculated considering the sectional weights as per Indian standard as mentioned in relevant clause. No extra shall be payable to the contractor for any deviation in weights for the two different procedures adopted for issue and calculation of the theoretical consumption including rolling tolerances.		
5.11.2	Actual consumption = Issue – Surplus.		
5.11.3	Surplus = Un-tempered, unused, uncut quantity of steel returned by the contractor to BHEL store.		
5.11.4	Wastage = Actual consumption – Theoretical consumption.		
5.12	<b>STRUCTURAL STEEL WASTAGE</b> (Except Fabricated Structural Steel as supplied by BHEL as free of cost, NO wastage will be permitted for fabricated structural steel)		
5.12.1	Allowable wastage – 4 % (four percent) of the theoretical consumption shall be considered. Wastage is further classified as cut pieces and scrap measured as per actual weight basis. Invisible wastage (loss of materials due to gas cutting, straightening of edges etc.) shall be limited to 0.5 % (zero point five percent) of theoretical consumption and shall be considered for reconciliation purposes only. But this invisible wastage shall be considered to be included in allowable wastage (i.e. four percent).		
	Sl. no	Structural steel materials	Basis of issue & penal recovery
	S-1	Theoretical consumption (without considering any wastage, scrap or loss) as per specification & drawing.	Free
	S-2	Wastage limited to plus four percent (+4%) of the aforesaid theoretical consumption (S-1) towards allowable wastage.	Free
	S-3	Wastage beyond four percent (4%) of the aforesaid theoretical consumption (S-1).	Penal rate
5.13	<b>RECONCILIATION OF BHEL ISSUED MATERIALS</b>		
5.13.1	The contractor shall submit a reconciliation statement of steel and other materials issued to him once in two months. The same may be submitted along with each RA bill.		
5.13.2	At the time of submission of bills, the contractor shall properly account for the material issued to him as specified herein to the satisfaction of BHEL certifying that the balance material are available with contractor's custody at site.		
5.13.3	If it is noticed by BHEL that the wastage is high and calls recovery at the penal rate, then BHEL will proceed for recovery for the excess wastage as per penal recovery rates as specified.		
5.13.4	The approved drawings/ bar bending schedules are to be considered for the purpose of reconciliation of materials.		
5.14	<b>RECOVERY OF MATERIAL</b>		
5.14.1	If wastage exceeds the specified limit, the recovery of excess wastage shall be made from monthly RA bill at the penal rate stipulated below.		
5.14.2	<b>PENAL RATE OF MATERIALS</b>		
	Item	Penal rate (USD)	
	Reinforcement steel etc.	1150/- per MT.	

	Structural steel, Structural Fabricated Materials & MS/GI Bar	1560/- per MT.
	Ready Mix Concrete (RMC)	105% of BHEL purchase cost.
<b>6.0</b>	<b>INSPECTION, TESTING AND INSPECTION CERTIFICATES</b>	
6.1	The engineer, his duly authorized representative and / or an outside inspection agency acting on behalf of BHEL / owner shall have access at all reasonable times to inspect & examine the materials & workmanship of the works during its manufacture and if part of the works is being manufactured or assembled on other premises or works, the vendor shall obtain for the engineer and for their duly authorized representative permission to inspect as if the works were manufactured or assembled on vendor's own premises or works. Necessary arrangement for carrying out inspection including supply of labour, IMTEs, area illumination and scaffolding, if required will be vendor's responsibility and same has to be carried out within the quoted price.	
6.2	To facilitate advance planning of inspection in addition to giving inspection notice the vendor shall furnish quarterly inspection program indicating schedule dates of inspection at customer hold point and final inspection stages. Updated quarterly inspection plans will be made for each 3 consecutive months and shall be furnished before beginning of each calendar month.	
6.3	Before any plant / equipment leaves the place of manufacture, BHEL shall be given the option of witnessing inspections & tests for compliance with specifications & related standards. The vendor shall give the engineer / inspector 15 days written notice of any material being ready for testing. Such test shall be to the vendor's account except for the expenses of the inspector. The engineer / inspector, unless the inspection is waived will attend such tests within 15 days of the date on which the equipment is notified as being ready for test / inspection, failing which the vendor may proceed with test which shall be deemed to have been made in the inspector's presence and he shall forthwith forward to the Inspector duly certified copies of test reports.	
6.4	The engineer or inspector shall within 15 days from the date of inspection as defined herein give notice to the vendor of any objection w.r.t. drawing / equipment / workmanship which in his opinion not in accordance with the specification / contract. The vendor shall either make modification as may be necessary to meet the said objection or explain to the engineer/ inspector giving reasons that no modifications are necessary to comply with the contract.	
6.5	When the factory tests have been completed at the vendor's or sub-vendor's works, the engineer or inspector shall issue a certificate to this effect within reasonable time after completion of tests but if the tests are not witnessed by the engineer or Inspector the certificate shall be issued within 15 days of the receipt of vendor's test certificate by the engineer inspector. Completion of these tests or the issue of the certificates shall not bind BHEL to accept the equipment should it on further tests after erection be found not to comply with the contract.	
6.6	In all cases where the vendor provides the tests at the premises of the vendor or any sub-vendor, the vendor except where otherwise specified shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by the engineer/ inspector to carry out effectively such tests on the equipment in accordance with the contract and shall give facilities to the engineer/ inspector to accomplish testing.	
<b>7.0</b>	<b>INSURANCE</b>	

	The contractor shall make available the original insurance cover(s) taken by him, against his T&P, assets and workmen compensation and any other cover as may be pertinent to his works and obligatory in terms of law, to BHEL for necessary verification in regard to their adequacy, before commencement of work. However, irrespective of such verification/ acceptance, the responsibility to maintain adequate insurance coverage at all times during the period of the contract shall be of the contractor alone. Such insurance covers to be taken shall be in the joint names of the owner and the contractor. The contractor shall however be authorized to deal directly with the Insurance company(s) and shall be responsible in regard to maintenance of such insurance covers. Insurance covers to be taken by BHEL / Customer shall be as stipulated under relevant clause of Volume-IB.							
<b>8.0</b>	<b>DEVIATIONS/ CLARIFICATIONS</b>							
8.1	Normally no deviation with respect to tender is acceptable to BHEL. However, in case of unavoidable circumstances, the bidder may submit their query for seeking clarifications of BHEL as per modality stipulated in NIT or may submit the same along with his offer as per prescribed schedule/ format without any ambiguity. Any assumptions, presumptions, deviations etc. indicated or implied anywhere by the bidder except those indicated in the deviation schedule/ format will not be recognized and will not form a part of consideration/ offer. In the absence of such filled-up schedule/ format it will be understood and agreed that the bidder's offer is based on strict conformance to the specification and no negotiation would be allowed in this regard. BHEL reserve the right not to recognize any/ all deviations submitted after opening of the bid.							
<b>9.0</b>	<b>DEWATERING</b>							
9.1	Contractor shall ensure at all times that ground of his work area & approach / access roads are free from accumulation of water, so that the materials are safe and the erection / progress schedule are not affected. No separate claim in this regard shall be admitted by BHEL. No separate payments for dewatering of subsoil, surface water or catchments water, if required, at any time during execution of the work including monsoon period shall be considered by BHEL.							
<b>10.0</b>	<b>TIME SCHEDULE/ COMPLETION PERIOD</b>							
10.1	<p>The entire work under the scope of work shall be successfully completed in all respect within <b>9 (Nine) months</b> from date of start of work, but readiness of Unit#2 for BLU by <b>5 (Five) months</b>, as certified by Construction Manager, BHEL.</p> <p>Mobilization at site shall be done within 20 days from date of written intimation from BHEL. The exact date of start of work shall be reckoned based on certificate of Construction Manager, BHEL.</p> <table border="1"> <thead> <tr> <th>SI no.</th><th>Work to be completed</th><th>Period from date of start of work</th></tr> </thead> <tbody> <tr> <td>1</td><td>Completion of electrical winch, Passenger hoist as per requirement, temporary lightening arrestor with electrode etc., temporary communication system</td><td>Within 1 Months</td></tr> </tbody> </table>		SI no.	Work to be completed	Period from date of start of work	1	Completion of electrical winch, Passenger hoist as per requirement, temporary lightening arrestor with electrode etc., temporary communication system	Within 1 Months
SI no.	Work to be completed	Period from date of start of work						
1	Completion of electrical winch, Passenger hoist as per requirement, temporary lightening arrestor with electrode etc., temporary communication system	Within 1 Months						

	2	Completion of horizontal Flue Can Erection & Mitre Bend Works	Within 4 Months	
	3	Completion of internal platform erection, flue liners erection & completion of permanent earthing system, etc & readiness for Boiler light up.	Within 5 Months	
	4	Completion of external painting and all other finishing works	Within 9 Months	
	5	Completion of all miscellaneous chimney works in all respects & handing over to BHEL / BIFPCL.	Within 9 Months	
	7	Any other Misc works not specified above but required for completion of the system (The milestone date shall be advanced whenever such structures readiness is required to meet erection / commissioning schedule of the project)	Within 9 Months	
10.2	<p>(a) Manpower to be augmented in multiple front as per requirement and programme based on L-3 / L-4 schedule.</p> <p>( b ) To meet project requirement it is envisaged that night shift working has to be done for which manpower deployment along with Engineers/Supervisors /Safety personnel with matching T&amp;P's has to be arranged.</p>			
11.0	<b>PRICE BID &amp; CONTRACT PRICE</b>			
11.1	<b>PRICE BID</b>			
11.1.1	Bidders should quote prices in USD as per format, Volume-III provided in the tender. Bids shall be evaluated based on total price quoted.			
11.2	<b>CONTRACT PRICE</b>			
11.2.1	Total price for Supply & Service together will be considered for evaluation and awarding.			
12.0	<b>TERMS OF PAYMENT</b>			
12.1	<p>The contractor shall submit his running bill (RA bill) once in a month at the end of each month in line with payment terms/ billing schedule indicated below. The RA bill complete in all respects accompanied by BHEL engineers certified/ measurement sheet, jointly signed, will be paid after passing of the bill subject to completeness &amp; correctness. The measurement will be taken as specified in terms &amp; conditions of contract and certified by the BHEL engineer of actual work. However, no extra payment shall be made in the event of delay in release of payment.</p> <p>95% pro-rata monthly RA payment shall be considered for payment based on monthly work completion certificate to be issued by BHEL engineer as per approved BBU/Price Schedule.</p>			

	The payment shall be released within 30 days from the date of submission of complete invoice along with all necessary documents including Engineering Certificate to BHEL.
12.2	Out of above 95%, 1.5 % of gross bill amount shall be paid in the following manner on certification by BHEL engineer after compliance of each of following activity in each month. In case of non-fulfilment of respective activity by contractor in each month, no payment shall be made by BHEL against corresponding activity and no claim of bidder at a later date, whatsoever, in this regard shall be entertained by BHEL.
12.2.1	0.7 % shall be paid on compliance of housekeeping of contractor's working area and store/ office areas.
12.2.2	0.3 % shall be paid on compliance of general illumination of contractor's working area and stores, office area.
12.2.3	0.2 % shall be paid on compliance of applicable OHSAS requirement as per guidelines of BHEL/ PSER and as specified in the tender.
12.2.4	0.3 % shall be paid on compliance of applicable safety requirement as per guidelines of BHEL/ PSER and as specified in the tender.
12.3	DELETED
12.4	Balance 5% of contract value shall be paid against FAC (Final Acceptance Certificate) to be issued by BHEL / BIFPCL after completion of warranty period. However, if desired by vendor, this 5% may be released by BHEL against submission of equivalent amount bank guarantee as per Performance Bank Guarantee format, to be kept valid till warranty period, subject to the followings:
12.4.1	(i) Receipt of certificate that all works are completed in all respects;
12.4.2	(ii) Reconciliation of materials / T&P / MMD;
12.4.3	(iii) Completion of final bill formalities and
12.4.4	(iv) Handing over to BHEL.
12.5	Contractor shall make their own arrangement for making payment of impending labour wages and other dues in the meanwhile.
12.6	Contractor have to submit BHEL entry gate pass for steel, and other materials required for the work, in absence of which their corresponding RA bills shall not be processed.
12.7	Subject to any deduction which BHEL may be authorized to make under the contract, the contractor shall on the certification of the BHEL engineer at site, be entitled to payment explained hereunder.
12.8	The bills will be sent to BHEL, Site Finance for scrutiny and payment will be made after processing / verification only.
12.9	The measurement will be taken by BHEL engineer as per relevant clause of GCC and certify regarding actual work executed in measurement book and bills for work. However no additional payment shall be made in the event of delay in release of payment beyond the stated period.
12.10	All admissible recovery / adjustment, etc. shall be made from interim payable amount.
12.11	BHEL site at its discretion may split up percentage break up and effect payment to suit the site condition, cash flow requirement, according to the progress of work.
12.12	Payment shall be made in USD as per order.  However for reasons, solely at the discretion of BHEL, if USD amount is not possible to be paid then BDT equivalent of USD will be paid at the Buying Exchange Rate of USD (of our banker) as on the date of payment.

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 14 OF 36

	The quoted / accepted rate shall remain firm throughout the contract period including extension period, if any, without any escalation till handing over.
<b>13.0</b>	<b>DELETED</b>
<b>14.0</b>	<b>TAXES, DUTIES ETC</b>
<b>14.1</b>	<b>IMPORT DUTIES:</b>
<b>14.1</b>	IMPORT DUTIES: Exemption of Duties/Taxes imposed on imported goods/equipment for implementing Rampal 1320 MW ( Coal-based) Friendship super Thermal power project under Bagerhat district of Khulna Division operated by Bangladesh-India Friendship Power Company ( Pvt ) Limited ( BIFPCL)
14.1.1	<p>As per Special Regulatory Order # 126 of 2021 dtd 24.05.2021 it is to be noted that all imported goods/ equipment for implementation of the 1320 MW Rampal project shall be exempted from imposable import duties, VAT and supplementary customs duty.(For clear understanding of exemption available, bidder may refer to SRO 126 dated 24th May 2021)</p> <p>.</p> <p>During importing temporarily imported erection materials, equipment and spare parts and permanently imported plant and equipment exempted under this order will not be sold or otherwise transferred without payment of duties and taxes imposable on those.</p> <p>Exemption shall not be extended to such goods which the bidder might import for support of their operational activities but not directly attributable for execution of the project such as air conditioner, refrigerators, vehicles, household materials etc.</p> <p>Any documentation needed for availing of Duty Free Imports will be submitted by the bidder in reasonable time having regard to the time for delivery of the work and the time for completion.</p>
14.1.2	In case of any local purchases by the Bidder on which Bidder shall have to pay VAT, the same shall have to be borne by the Bidder.
14.1.3	Temporarily imported erection materials, machineries and spare parts during construction period of Project are exempted from payment of Customs Duty and VAT. Such items shall be exported within six months from the commercial operation date. Documentation for the same to be submitted / maintained by the bidder.
14.1.4	Any Taxes for exporting material from source country & as applicable in the source country shall be on bidder's account. However, bidder to take into consideration Duty Free Export Provisions in source country, as applicable, including that in GST in case of exports from India. As such, while offering the rates, the bidder may take into account the benefit of above provisions, as the cost of input to the bidder will be net of such taxes and adjust their offer price accordingly to make it more competitive.
	Bidder may import the material required for permanent works for which exemption of Custom Duty as per local law shall be applicable provided necessary documents are submitted.
<b>14.2</b>	<b>BANGLADESH VAT</b>
14.2.1	The Bidder shall submit copy of VAT registration Certificate Musak-2.3, TIN Certificate, Trade License to the BHEL site office immediately after receiving the Order but before raising the first Tax Invoice against this tender.
14.2.2	As per the provisions laid down U/S49(5) of Bangladesh VAT Act 2012,Output Services of the Bidder shall attract ZERO ( 0 ) VAT. Thus BHEL shall not do any VDS. Hence Bidder shall not load any VAT on Output Services.

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 15 OF 36
14.2.3	Adequate documents for not charging/ claiming VAT from BHEL shall be made available to the Bidder.	
14.2.4	The bidder shall raise Tax Invoice (Challan Patra) as per Rule 40(d)(v) (Musak-6.3) of the Bangladesh VAT and supplementary Duty Rule,2016 mentioning Name, Address and VAT Registration Number of BHEL site office.	
14.2.5	<p>Bidder shall note that the Tax Invoice complying with Rule 40(d)(v) of the Bangladesh VAT and supplementary Duty Rule,2016 must contain the 'Bill to' and 'Ship to' details as below:</p> <p>BHEL Bangladesh VAT Regn. No. 000761853-0208  Bharat Heavy Electricals Limited  Power Sector Eastern Region,  2x660 MW Maitree Super Thermal Power Project, Moidara Village,  Rampal Upazila, Bagerhat District, Bangladesh</p>	
14.2.6	Bidders shall quote price excluding Bangladesh VAT on Output Services as no VAT is leviable on the same. In this connection please note that VAT, if and as applicable, on Bidders Quoted Price and in case BHEL is unable to provide exemption documents shall be payable extra.	
14.2.7	<b>Value Added Tax Deduction at Source:</b>	
14.2.7.1	BHEL will not deduct any VAT from Bidder's Gross Bill and such bidder need not to load any Output VAT in Bidder's quoted price	
14.3	<b>INCOME TAX DEDUCTION AT SOURCE:</b>	
14.3.1	<p>Bidder should have valid 12-digit TIN number in Bangladesh prior to start of work. Advance Income Tax (AIT) under the Income Tax Ordinance,1984(and rules made thereunder) shall be deducted at prevailing rates on Gross Invoice value from the bills unless Exemption Certificate from the appropriate authority/ authorities is/ are furnished under Income Tax Laws of Bangladesh</p>	
14.3.2	Since payment shall be made in Bangladesh. Bangladesh Income Tax (AIT) shall be deducted, if applicable.	
14.4	The Bidder shall carry out their own tax diligence to get acquainted with the relevant rules and regulations of Bangladesh pertaining to the subject job.	
14.5	Except otherwise mentioned above bidder shall quote their rates/ price inclusive of all taxes, duties, cess, any State or Central Levy, social security contribution and other Taxes in or outside Bangladesh (but excluding Bangladesh VAT & Import Duties) in line with provisions as mentioned above etc. together with variation thereto during contract period including extension, if any. BHEL shall not release any additional payment in this regard.	
14.6	The bidder is responsible for compliance of all relevant Tax Laws of Bangladesh and all other related places outside Bangladesh in connection with this contract and BHEL will not bear any such liability.	
14.7	<p>New tax &amp; duties, if imposed subsequent to latest due date of offer submission, as per NIT &amp; TCN, as applicable, by statutory authority after due date of submission of latest price offer and within the contract period including extension, if any (provided reason for extension is not attributable to vendor), shall be reimbursed by BHEL at actual on production of relevant supporting document to the satisfaction of BHEL. However, the vendor shall obtain prior approval from BHEL before depositing new taxes &amp; duties.</p> <p>Benefits and/or abolition of all existing taxes must be passed on to BHEL against new Taxes, if any, proposed to be introduced at a later date.</p>	
15.0	<b>PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT</b>	
	To meet the need of construction management at site, contractor shall provide the following services within quoted/ accepted rates.	
15.1	<b>CUSTOMS CLEARANCE</b>	
	The Contractor shall be responsible for both end, India or other country and Bangladesh, customs clearance of all materials, supplies, equipment, tools and other	

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 16 OF 36
	<p>articles shipped into Bangladesh by him for the implementation of his works, including the food and the personal effects of the Contractor's personnel.</p> <p>All payment for clearance charge, storage charge, etc. which are imposed by the relevant agencies of the Government of Bangladesh, relating to the clearance of equipment, materials and Plant that will be incorporated in the Permanent Works or relating to the Temporary Works shall be borne by the Contractor. Further, if the Contractor is delayed in submitting necessary shipping documents to the Employer, the demurrage charges by the Port Authority will be borne by the Contractor.</p> <p>Tools and equipment and other equipment of the Contractor for use during construction but which are to remain the property of the Contractor and which are to be exported by the Contractor from Bangladesh at the completion of the Work shall be carefully documented and specially listed to facilitate both import and export. The Contractor shall determine prior to shipment the customs regulations applicable to this special case as well as normal import rules and regulations applicable. The Contractor shall also be responsible for inland transport by barge/ truck/train to the Site.</p>	
<b>15.2</b>	<b>RECEIVING, TRANSPORTING, HANDLING AND STORAGE</b>	
	<p>The Contractor shall receive, transport, handle, store and install all materials and equipment furnished under these specifications, or otherwise involved in the implementation of this Contract. It shall be the responsibility of the Contractor to determine the availability and capacity of transportation and unloading facilities (including for the transportation, delivery and receipt of all equipment, materials, Plant to the Site) and to make the required arrangements to secure the necessary facilities for the same.</p> <p>The Contractor shall be responsible for the prompt unloading of all equipment or materials. The Contractor shall pay any demurrage incurred due to delay in unloading and for any other reasons.</p> <p>The Contractor shall handle materials and equipment carefully to prevent damage or loss. The use of bare rope slings for handling will not be permitted unless specifically approved by the Engineer. Special handling devices shall be used when necessary to avoid damage.</p> <p>In addition the Contractor shall also comply with the requirements of Technical Specification with respect to the receipt, transportation, handling and storage.</p> <p>If BHEL has to unload RS, SS, or any other free issue materials before mobilization of the contractor for the interest of the project or If contractor fails to unload the free issue materials at site for any reason, then BHEL shall be unloading the same and the cost of unloading with following rates shall be deducted from contractor RA Bill.</p> <p>i) For RS, SS, or any other materials: - USD 4/MT or actual cost, whichever is higher.</p>	
<b>15.3</b>	<b>PLATFORMS</b>	
	<p>Open platforms shall be constructed by the Contractor at least 50 cm above grade and shall have adequate flooring and base structure to support the stored materials and equipment.</p>	



TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 17 OF 36

<b>15.4</b>	<b>INDOOR STORAGE</b>
	Indoor storage sheds shall be constructed by the Contractor by suitable means for keeping materials and equipment from contact with the ground and to protect it from the environment and outside atmosphere. Sensitive equipment (including inter-alia, electrical, I&C and other equipment) must be kept in dust proof and ventilated rooms and means have to be provided to maintain the moisture content at required levels, in accordance with Good Industry Practices.
<b>15.5</b>	<b>SHORING</b>
	Shoring shall be provided by the Contractor to safely support materials and equipment not less than 30 cm above the ground. The ground shall be compacted and concreted or asphalted.
<b>15.6</b>	<b>WEATHERPROOF COVERINGS</b>
	Weatherproof and flame resistant sheeting of sufficient size for outdoor storage shall be provided by the Contractor. The sheeting shall be carefully placed and tied down to prevent moisture and wind from entering underneath the sheeting and to otherwise protect the equipment, materials and other Plant.
<b>15.7</b>	<b>IDENTIFICATION OF CONTRACTOR'S EMPLOYEES, VEHICLES &amp; BUILDINGS</b>
	<p>The Contractor shall provide each of his employees and his Subcontractor's employees with a name tag bearing the picture, the name or initials of the employee, a serial number and the name of the Contractor. Each employee shall wear his badge visibly to the security personnel at any time.</p> <p>Subcontractor's employees with a name tag bearing the picture, the name or initials of the employee, a serial number and the name of the Contractor. Each employee shall wear his badge visibly to the security personnel at any time.</p> <p>All vehicles and large equipment furnished and used by the Contractor or his Subcontractors on the Work shall be clearly marked with the Contractor's or Subcontractor's business name. The Contractor's offices, stores, depots and other facilities shall also be clearly identified. The detailed requirements are defined in the Health, Safety and Environment (HSE) Plan of BHEL.</p> <p>Around-the-clock security presence and operational routine shall be maintained throughout the year. Passes and temporary identification permits shall be issued and examined and access to any part of the Site, the site offices and living accommodation shall be controlled and limited to those who have an authorization.</p>
<b>15.8</b>	<b>EXPATRIATE PERSONNEL</b>
	<p>The Contractor shall submit to Employer data of all personnel he intends to bring into Bangladesh for the performance of the Work. This data shall include the name and present address of each person, his intended assignment and responsibility in connection with the Work and a concise resume of his experience in the type of work to which he will be assigned. This data shall be submitted to the Employer at least thirty (30) days prior to their expected arrival in Bangladesh.</p> <p>Any expense associated with illness of the Contractor's personnel, including</p>

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 18 OF 36

	<p>replacement thereof, shall be to the Contractor's account.</p> <p>Costs of passports, visas, travel documents, inoculations and other incidental expenses incurred by the Contractor's non-Bangladesh employees and their dependents occasioned by travel to and from Bangladesh shall be borne by the Contractor.</p> <p>All accommodations and amenities for the Contractor's personnel and families (including all staff and labour) must be provided by the Contractor, and the Employer shall not have any liability for the same.</p>
<b>15.9</b>	<p><b>SAFETY</b></p> <p>The Contractor shall comply with all ordinances and regulations including, but not limited to, National, State, Municipal laws and Department of Labour, Transmigration and Co-operation Regulations, and other Applicable Laws that are in force in the locality of the Works and shall comply with any instructions that may be from time to time issued by Employer. The safety rules and regulations laid down in the Health, Safety and Environment (HSE) Plan are to be strictly adhered to.</p>
<b>15.10</b>	<p><b>CONTRACT PLANNING AND CONTROL</b></p> <p>Before starting the Work at the Site, the Contractor shall submit the detail site management organization for approval by the Employer. Such proposals shall show clearly the Contractor's key personnel, classification and qualification with the detailed information and curriculum vitae for above key personnel.</p> <p>The Contractor's Representative, site manager and senior key personnel who will be responsible for working closely with the Employers staff to achieve efficient execution of the Contract shall be competent to conduct meetings and communications in the English language.</p> <p>The Contractor shall submit daily and monthly progress report as per the format for monitoring of the project.</p>
<b>15.11</b>	<p><b>RELEASE OF INFORMATION</b></p> <p>The Contractor shall not communicate or use in advertising, publicity, or sales release, photographs or other reproductions of the Work under this Contract, or descriptions of the size, dimensions, quantity, quality, or other information concerning the Work unless prior written permission has been obtained from the Employer.</p>
<b>15.12</b>	<p><b>SAFETY AND ACCIDENT PREVENTION</b></p> <p>It shall be the Contractor's responsibility to maintain throughout the construction period, a safety and accident prevention program satisfactory to the Employer which meets the requirements of Applicable Laws and of all other Governmental Authorities authority having jurisdiction over the Works. The rules and regulations laid down in the Health, Safety and Environment (HSE) Plan must be adhered to at all times.</p>

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 19 OF 36

<b>15.13</b>	<b>SECURITY</b> <p>The Contractor shall be solely responsible for the security of all equipment and materials incorporated or to be incorporated in the Work by him and all equipment, materials, tools, supplies, structures, facilities and others properly used in the execution of the Work while in his care and custody.</p> <p>The Contractor shall conform also to any specific security requirements of Employer but such compliance shall not relieve the Contractor from the total responsibility for security.</p>
<b>15.14</b>	<b>HOUSING &amp; TRANSPORT</b> <p>The Contractor shall arrange for suitable housing units together with furnishing and utilities in the close proximity of the construction Site for accommodation of all his expatriate personnel. If the services of any expatriate personnel of the Contractor or its Subcontractors.</p> <p>If the Contractor decides in consultation with the Employer that the health or safety of any of his personnel is or might be jeopardized by political or health hazards in Bangladesh, the Contractor may, after forty eight (48) hours' notice, order its employees and the employees of its Subcontractors and suppliers to return to their headquarters or other safe location, in which case the Work will be deemed to be suspended for the duration.</p> <p>The Contractor shall provide to the extent agreed transport vehicles for use during construction period by the expatriate as well as local personnel.</p>
<b>15.15</b>	<b>PROPRIETARY NAMES</b> <p>Whenever a material or article is specified or described on the plants by using the name of a proprietary product or by using the name of a particular manufacturer or vendor, the specific item mentioned shall be understood as establishing the type, function and quantity desired. Unless otherwise specified, other manufacturers' products which in the opinion of the Employer are equivalent of those specified will be accepted. Such items shall be submitted for approval prior to their incorporation in the Works.</p>
<b>15.16</b>	<b>PERFORMANCE OF THE WORK</b> <p>The Contractor shall conduct all Works in such a manner as to cause the least possible disturbance or damage to the environment. In cases where some temporary disturbance or damage is unavoidably caused due to the nature of the work, the Contractor shall, as soon as possible, remove the cause of such temporary disturbance, repair the damage and, in general, restore the affected areas to their original condition to the extent possible, and in a manner satisfactory to the Employer, the landowner and any authorities.</p> <p>Prior to commencement of the Work, the Contractor shall provide details of its EMP specifically addressing the following:  Environmental management system and manual – policies, standards and procedures, and programs; organization / responsibilities;</p>

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 20 OF 36
	<p>Training Incident and accident investigation; Management support; Environmental protection, mitigation and restoration; Emergency preparedness and response;</p> <ul style="list-style-type: none"> <li>• Socio-economic plans, including historical and cultural resources;</li> <li>• audit, monitoring and corrective action;</li> <li>• information and records management; and,</li> <li>• Integration of safety &amp; health requirements with the EMP.</li> </ul> <p>All aspects of the EMP and the environment work requirements are the Contractor's accountability and the Contractor, its management and its Site supervisory staff will be held responsible for its implementation.</p> <p>All relevant Health, Safety and Environment (<b>HSE</b>) issues, results of audit and monitoring plans and programs, and HSE performance indicators will be communicated to the Contractor's management and the Employer through daily inspection meetings and reports, weekly construction meetings, monthly meetings, and in terms of the monthly project report.</p> <p>The Contractor shall ensure that he has complete knowledge of all the laws, statutes, statutory instruments, regulations, rules, treaties and conventions (by whatever name or title), environmental protection regimes and other Applicable Laws, in each of the jurisdictions where he shall perform the Work. The Contractor shall also take all necessary measures to protect the atmosphere, ocean, rivers, groundwater, seaports and land from pollution. In any event the Contractor shall promptly use its best efforts to eliminate and clean up any pollution caused, directly or indirectly, by the Contractor or which occurs at the Site, or other sites associated with this Work.</p> <p>The Contractor shall cooperate in all respects with any participant environmental representatives and with governmental persons, and allow them to inspect any and all equipment or operations that they wish to observe. The Contractor shall, at all times, be ready to discuss the implementation of the Contractor's safety, health and environmental protection program.</p>	
15.17	<p><b>INSTRUCTION TO WORKERS (ORIENTATION / INDUCTION)</b></p> <p>The Contractor shall ensure that all employees, subcontractors, servants and agents (and employees, servants and agents of all Subcontractors) participating in the Work, are advised about the strategy and plan for managing the environmental-social issues related to the work, and on their role and responsibility; instructed on the requirements of environmental laws, rules, regulations and specific permit conditions applicable to the area and the Work; instructed on the application and use of the required personal protective equipment (PPE) for their job duties and</p>	

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 21 OF 36

	functions; and, have received the appropriate training in the use, application and maintenance of PPE.
<b>15.18</b>	<b>RISK MANAGEMENT</b> <p>The Contractor shall clearly state the management methods and techniques to be used to identify potential hazards and risks at any stage prior to the execution of a particular activity. If required, specific procedures shall be developed by the Contractor to eliminate or mitigate the hazard to a safe level prior to the work being authorized. All requirements of the project's environmental impact assessments ("EIA") and other relevant assessments and conditions of approvals accorded by the relevant Governmental Authorities must be considered by the Contractor in the development of the Contractor's Health, Safety and Environment (HSE) Plan, EMP and other related/relevant plans. The Contractor is required to implement a system whereby all risks associated with hazardous substances, whether chemicals, by-products, effluents or waste materials, are minimized and/or eliminated. In conjunction with its emergency plans and procedures, the Contractor shall develop and submit to the Employer's Representative a "Safety Philosophy Document" that details the strategy to be adopted for control and shutdown systems, including alarms and programmable electronic control systems.</p>
<b>15.19</b>	<b>EMERGENCY PREPAREDNESS, RESPONSE &amp; CONTINGENCY PLAN</b> <p>The Contractor shall prepare an Emergency Preparedness, Response and Contingency Plan (a detailed program of action to minimize the effects of an abnormal event requiring prompt actions beyond normal procedures to protect human life, minimize injury and safeguard the environment) for environmental and personal safety emergencies or incidents. This plan shall be found within the Contractor's Safety &amp; Health and/or Environmental Programs. The purpose of the plan shall be to limit insurance and damage to people, property and the environment respectively. The plans, procedures, and trained personnel shall be in place for the duration of the Contract to manage and control emergency situations and incidents in a proper and expeditious manner.</p>
<b>15.20</b>	<b>SERVICING AND FUELLING</b> <p>To ensure adequate response capability in the event of a fuel, ground spill or other spill, all fuel transport vehicles and the Contractor's foreman vehicles shall carry a suitable amount of commercial absorbent material. In addition, floating absorbent pads and booms for spill clean- up on open water shall be kept accessible on the construction Site.</p> <p>All service vehicles and/or equipment utilized for re-fuelling must be equipped with automatic shut-off valves. All equipment or servicing activities with the potential for accidental spills (e.g., oil changes, hydraulic repair, coolants) will require appropriate containment methods to be in place (i.e., storage containers, impervious liners, absorbent materials, etc.) prior to the start of the activity.</p>
<b>15.21</b>	<b>SOIL AND GROUNDWATER PROTECTION</b> <p>The Contractor shall develop and implement soil and groundwater protection measures. Protection measures shall include building and impervious floors, where appropriate. The Contractor shall make an assessment of groundwater quality prior</p>

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 22 OF 36

  

	to the start of construction and prior to commissioning to demonstrate to Employer's Representative that construction activities have not adversely affected the environment. Groundwater quality shall be monitored throughout the construction phase.
<b>15.22</b>	<p><b>HEALTH HAZARDS</b></p> <p>Worker and public health is a critical part of any HSE management program. The Contractor shall control substances and materials that may be a hazard to worker's health. These controls shall be a combination of hazard communication, safe work systems and the controlled handling and disposal of hazardous materials. The Contractor's controls shall commence at contract preparations and procurement stages, where all vendors and subcontractors shall be required to submit Material Safety Data Sheets ("MSDS") for all hazardous materials that will be supplied, provided or brought onto the Site. These MSDSs shall be forwarded to Contractor's HSE Manager for review and records management.</p> <p>In the event hazardous materials are to be used, the Contractor shall carry out assessments according to recognized international standards, to determine if there are any more suitable or less hazardous materials that could be substituted for the original materials. Only when the Project Manager, Employer and his Engineer and the Contractor are satisfied that assessments have been completed, and control measures are adequate to protect worker health, the materials shall be allowed on the project worksite. The Contractor's control measures shall include:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Material transport, storage, labelling, packaging, and disposal,</li> <li><input type="checkbox"/> Personnel protective equipment (PPE),</li> <li><input type="checkbox"/> Health surveillance and monitoring, and</li> <li><input type="checkbox"/> Emergency procedures and training.</li> </ul> <p>All explosive materials to be used for blasting during Site preparation shall only be handled by approved and qualified personnel. All explosive materials shall be stored in a secure, limited access sites, protected from workers and the public, and removed from the site every day and immediately after use.</p> <p>All radioactive equipment and materials shall only be used by qualified, approved and permitted personnel. Radioactive materials must be stored in approved and protected containers. Radioactive materials and waste products shall not be disposed of on-site but removed in protective containers and disposed at government approved storage and disposal sites</p>
<b>15.23</b>	<p><b>WASTE MATERIAL MANAGEMENT</b></p> <p>The Contractor shall ensure that waste management identification, handling, transport and disposal are addressed in the development of their HSE management plans.</p> <p>The Contractor's employees responsible for handling hazardous materials</p>

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 23 OF 36
	<p>(including wastes) shall receive training and certification in the handling, transport, storage and disposal of chemicals and regulated or hazardous materials. Where applicable, Workplace Hazardous Materials Information System (“WHMIS”) certification and training, or its equivalent, shall be made available to employees. Regular written updates shall be included for continued employee awareness.</p> <p>The Contractor shall ensure proper segregation and isolation for wastes that could react together in the event of a leak or other incident. These facilities shall include lockable, fire proof cabinets or storage in shelving units separated by fireproof barriers or walls.</p> <p>The Contractor shall dedicate a space for waste and drum storage. The storage area must be easily accessible for spill containment and emergency response and not be susceptible to flooding.</p> <p>For any waste storage area which could accumulate hazardous gases, vapors, or dust due to the nature of the wastes stored, the Contractor must supply suitable ventilation or other controls to ensure exposure by employees is kept below required minimum standards. Storage areas for hazardous wastes shall be designated as restricted areas and shall be suitably equipped to control an incident involving a leak or spill.</p> <p>The Contractor shall make available suitable fire extinguishing equipment and proper electrical bonding equipment in all areas involving the handling and storage of flammable and reactive wastes.</p> <p>Disposal of wastes by burning will not be allowed on the construction site.</p> <p>Sumps and waste pits shall not be used for waste storage at the work site. Sumps should only be used for temporary control and containment of spills, equipment leaks, etc. If the Contractor encounters former sump sites or waste pits during ground surveys, the Contractor shall identify and investigate the same. If any contamination is suspected, the Contractor shall excavate, remove and where required replace with an approved sump container system.</p> <p>The Contractor shall develop and implement a waste disposal control system. This system shall control every load of waste leaving the worksite, detailing the type of waste disposal, waste origin and destination, approximate weight, date and transport details on a waste manifest/document. These documents shall be audited.</p>	
15.24	<p><b>SPILL RESPONSE AND CONTROL</b></p> <p>All spills shall be stopped and cleaned up immediately to avoid potential impact to water and soil quality. All spills shall be reported using the Incident Management Process. Under no circumstance contaminated material may be “stored” on the work site.</p> <p>All spills shall be rapidly stopped and appropriately eliminated as defined in the Contractor’s Emergency Preparedness, Response and Contingency Plan. Spills shall be contained in a way that will prevent their redistribution. All ground spills</p>	

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 24 OF 36
	<p>shall be contained as quickly as possible through diking, suction methods, excavation and the use of absorbents or other appropriate recovery techniques.</p> <p>A list including the type, quantity and location of the storage of retaining and clean up equipment to be used during construction shall be prepared. The list shall include the procedures and mitigation measures to be used in case of a spill. A written inventory will also be prepared, before starting construction works, including lubricants, fuels, solvents, chemicals and other materials that might be accidentally discharged during construction.</p> <p>All on-site fuel storage tanks shall be located in an impermeable secondary containment area with a holding capacity equal to 110% of the largest tank within the berm. For above ground tanks, the tanks shall be surrounded by a berm, the entire area covered with a suitable commercial absorbent material and with a sealed plastic liner to form an area that can be pumped out in the event of a leak in the tank. A waste handling plan shall be made with the purpose of identifying the procedures necessary for cleaning and disposing of residues from a major spill. In the event of a spill, the Contractor shall make all resources available to contain and clean up the spill. Traffic shall be minimized in and around the spill site.</p>	
<b>15.25</b>	<p><b>NOISE CONTROL</b></p> <p>Noise level specifications to be followed by the Contractor in design, assessment and monitoring activities are based upon the maximum (acceptable) levels which plant personnel may be exposed during their normal working duties. The Contractor shall be familiar with and comply with the environmental guidelines as issued by the relevant Governmental Authorities in Bangladesh, including the Department of Environment, Government of Bangladesh and other relevant Applicable Laws.</p> <p>All internal combustion motors of vehicles, machinery and equipment used during the construction phase, shall have adequate noise silencers, and shall be kept in good operating conditions, during the entire construction period. Where temporary noise pollution of greater than 85 dBA will occur, temporary silencers shall be used. Equipment noise should not exceed the specified limits at accessible locations.</p>	
<b>15.26</b>	<p><b>CONSTRUCTION TRAFFIC PLANNING</b></p> <p>The Contractor shall ensure that the construction Site is organized in such a way that pedestrians can move safely and without risk. The Contractor shall firstly select the lowest period of traffic flow for equipment crossings; and secondly, ensure that traffic patterns and entrances to private and public roads for access are not obstructed during construction activities. All site entry will be controlled by vehicular passes. Road closures, on-site and off-site, shall be with the approval of the Contractor's site manager and/or road closure permit. Site traffic shall be minimized and speed limits posted and enforced.</p>	
<b>15.27</b>	<p><b>HOUSEKEEPING</b></p> <p>All construction debris and other garbage shall be continuously collected and disposed at an approved facility. At the end of each day, all waste material shall be removed from the construction Site and deposited at the approved allocated area. The approved procedures to manage waste shall be specified in the Contractor's</p>	



TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 25 OF 36
	<p>waste management plan. All empty hazardous material containers shall be removed from the work area as soon as is practicable. All empty gas containers and bottles shall be returned to their storage area and secured properly.</p> <p>The Contractor's shall prepare a pest and vector control program to address specific site conditions, including a mosquito control program.</p>	
<b>15.28</b>	<b>CONSTRUCTION CAMPS</b>	
	<p>The location of work places, camps, areas of storage and installation of works, compression, regulation and communication stations shall be located on levelled land, avoiding areas with non-cohesive soils to avoid erosive processes.</p> <p>Health conditions in the camp shall be controlled in order to prevent contamination of adjacent groundwater or surface water resources. Domestic sewage generated at the construction sites shall be eliminated by two systems of septic/absorption tanks or chemical toilets located on the sites.</p> <p>Solid combustible garbage shall be collected and secured daily, until disposal, to prevent the attraction of livestock, vermins and wild animals. Residue shall be disposed of, along with non-combustible garbage, in a disposal location approved by the Authorities.</p> <p>Upon abandonment, the camp site area shall be cleared of all trailers, piping, cable, insulation, lumber, blockage, metal wastes, etc., and re-graded according to the landscaping concept. These guidelines and procedures for the management of domestic and other waste shall be specified in a plan.</p>	
<b>15.29</b>	<b>SITE REGULATION MANUAL</b>	
	<p>The Contractor shall thirty (30) days prior starting any Work at the Site furnish a detailed and comprehensive site regulation manual for its proposed operation and works on the Site, which shall be based on the site related regulations and requirements in the Contract and which shall be subject to Employer's approval. All work on the Site, shall be carried out in compliance with the so approved site regulation manual.</p>	
<b>15.30.1</b>	<b>PLANNING &amp; MONITORING</b>	
15.30.1.1	<p>The bidder shall prepare detail construction schedule (L-3) as per completion dates given in this document. This schedule must include all milestone and key activities for each subsystems / components in the areas of engineering (wherever applicable), procurement, manufacture (wherever applicable), excavation / construction / erection. This network must conform to the overall project schedule. The bidder should also ensure monitoring of these activities at least weekly basis to start with and on daily basis whenever required by BHEL.</p>	
15.30.1.2	Deleted	
15.30.1.3	Deleted	
<b>15.30.2</b>	<b>PROGRESS REPORTING</b>	
15.30.2.1	<p>The bidder shall submit daily, weekly and monthly progress reports for work force, materials reports, consumables (steel / gases / electrodes) report and other reports as per pro-forma considered necessary by BHEL. In case of any failure on contractor's part to comply with this, BHEL may at its discretion, consider to withhold part payment against their RA bills.</p>	
15.30.2.2	<p>The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which the contractor</p>	

	intends to take to make good the slippage or lost time, so that further works again proceed as per the original program and the slippages do not accumulate and effect the overall program.	
15.30.2.3	The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged.	
15.30.2.4	Weekly progress review meetings will be held at site during which actual progress during the week vis-à-vis scheduled program shall be discussed or actions to be taken for achieving targets. For discussions, the contractor shall present program of subsequent week. The contractor shall constantly update/revise his work program to meet the overall requirement.	
15.30.2.5	Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of bidder will be held once in a month at Kolkata / site. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.	
15.30.2.6	Deleted	
15.30.2.7	Successful bidder has to provide for electronic/ computerized storing and reproduction / printing / plotting of various data, log sheets, protocols, measurements etc. These may be stored in CD (as per requirement) and handed over to BHEL as per requirement.	
<b>15.30.3</b>	<b>SITE ORGANIZATION</b>	
15.30.3.1	The contractor shall maintain a site organization of adequate strength in respect of manpower, construction machinery and other implements at all time for smooth execution of the contract headed by a competent construction manager for site operations with sufficient level of authority to take site decisions. The vendor will submit organization chart (showing the name of SITE-IN-CHARGE) with individual bio-data indicating various levels of experts to be posted for supervision in the fields of supervision and execution, quality, material management, planning, safety, etc. The organization shall be reinforced from time to time, as required to make up slippage (if any) from the schedule without any commercial implication to BHEL. The organization chart is to be submitted within 10 days from the date from start of work.	
15.30.3.2	Following (minimum) engineering manpower with power plant construction background to be deployed at site by the successful vendor for their day to day supervision etc.	
15.30.3.2.1	Qualified safety officers with assistants (exclusive for safety supervision for project jobs).	Officer – Min. One no. Assistant – Min. One no.
15.30.3.2.2	Engineer / Supervisors for quality inspection	One no engineer /supervisor
15.30.3.2.3	Site supervising engineer and supervisors.	As per requirement
15.30.3.2.4	Planning/Billing Engineer (exclusively for planning)	One. Engineer
15.30.3.3	Deputation of above man-power shall be jointly decided at site in line with construction schedule.	
15.30.3.4	Engineer / supervisor for other functions like store & purchase, material management, fin, administration etc. are to be provided as per site requirement and not considered above.	
15.30.3.5	In the event of non-deputation of engineer/ supervisor by the bidder as per above agreed schedule, BHEL shall reserve the right to deduct USD 1050 per man-month for engineer, USD 650 per man-month for the supervisor / safety officer and USD	

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 27 OF 36

	650 per man-month for safety supervisor from RA bills. Further induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement without any financial implication.
15.30.3.6	BHEL reserves the right to reject or approve the list of personnel proposed by the contractor. The persons whose bio-data have been approved by BHEL will have to be posted at site and deviation in this regard will not be permitted unless specific & reasonable justification is made.
15.30.3.7	In addition to above, a well experienced qualified engineer to be designated, as 'Project Co-coordinator', shall be deployed by the contractor. Such engineer shall have adequate exposure on the job and shall remain fully involved in all planning activities, guidance etc. to contractor's own team during the complete execution period of contract.
15.30.3.8	The contractor should also submit to BHEL for approval a list of T&Ps along with their fitness certificates. The tools & tackles shall not be removed from site without written permission of BHEL.
15.30.3.9	The contractor should also submit network programs for the erection of various items. These networks shall show the BIFCL/ BHEL hold points, which have to be cleared by BIFCL/ BHEL, or their authorized representatives before further erection can take place. These programs for the erection would clearly identify responsibilities of the contractor and BIFCL/ BHEL. It is the responsibility of the contractor to get the Networks approved by BHEL within four weeks of the date of finalization of award of work/ placement from start of work.
<b>16.0</b>	<b>QUALITY CONTROL &amp; QUALITY ASSURANCE</b>
16.1	Contractor's engineers & supervisors shall be adequately qualified and also inclined to do a quality job. The quality assurance engineer shall co-ordinate all aspects of quality control, inspection, implementation of quality assurance procedures laid down in Quality Plan and technical specification by BHEL. He shall fill up quality assurance log sheets / formats and submit to BHEL for joint inspection and acceptance. The contractor shall fill up, maintain & preserve the quality records in computerized media. BHEL's authorized representative shall be given free access at all time to such quality related records etc. for inspection, review etc.
<b>17.0</b>	<b>QUALITY ASSURANCE PROGRAMME</b>
17.1	The contractor shall arrange for suitable quality assurance programme to control all activities pertaining to the scope of work, as necessary. Such programs shall be outlined by the contractor & shall be finally accepted by BHEL. A quality assurance programme of the contractor shall generally cover the following
17.2	Organization structure and qualification data for key personnel of the contractor for the management and implementation of proposed quality assurance programme
17.3	The procedure for source inspection, incoming raw material inspection, verification of material purchased etc.
17.4	System for maintenance of records.
<b>18.0</b>	<b>GENERAL REQUIREMENTS – QUALITY ASSURANCE</b>
18.1	All materials, components and equipment covered under the specification shall be procured, manufactured, erected, commissioned and tested, as applicable, at all stages as per comprehensive quality assurance program. An indicative program for inspection / test, to be carried out by the contractor, for some of the major items is given in the respective technical specification.
18.2	Field quality plan will detail out the quality practices and procedures etc. to be followed by the contractor's site quality control organization, during various stages of site activities from receipt of material / equipment at site.

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 28 OF 36
18.3	BHEL reserves the right to carry out quality audit and quality surveillance of the systems and procedures of contractor's quality management. Contractor shall provide all necessary assistance to enable BHEL to carry out such audit.	
18.4	Quality audit / approval of the results of test & inspection will not prejudice the right of BHEL to reject an equipment service not giving desired performance and shall not in any way limit the liabilities and responsibilities of the contractor in earning satisfactory performances of equipment/ service as per specification.	
18.5	Repair / rectification procedure to be adopted to make any job acceptable shall be subject to the approval of BHEL.	
18.6	All the latest relevant codes as per technical specification should be available with the contractor at site within 15 days from the date of placement from start of work or otherwise specified by Construction Manager/ Project Manager, BHEL.	
<b>19.0</b>	<b>HEALTH, SAFETY &amp; ENVIRONMENT</b>	
19.1	<b>REFER DOCUMENT NUMBER : HSEP:14-MAITREE:VENDOR: DATE: 05.05.16</b>	
	DOCUMENT TITLE:-HEALTH, SAFETY AND ENVIRONMENT PLAN FOR 2X660MW MAITREE SUPER THERMAL POWER PROJECT	
<b>20.0</b>	<b>SPECIFIC REQUIREMENTS FOR ISO 9002</b>	
20.1	Contractors shall ensure that all their staff / employees are exposed to periodical training programs conducted by qualified agencies/ personnel on ISO 9002 Standards.	
20.2	Contractor shall ensure that the quality is maintained in all the works connected with this contract at all stages of the requirement of BHEL.	
20.3	Contractor shall ensure that all MMDs that are used, whether owned by the contractors or used on loan, are calibrated by the authorized agencies and the valid calibration certificate will be available with them for verification by BHEL. A list of such instruments possessed by the contractor at site with its calibration status is to be submitted to BHEL Engineer for control.	
20.4	Contractor shall ensure that fitness certificate of the tools & plants, that are in use, whether owned by contractor or issued on loan, are tested by authorised agency and the valid fitness certificate is available for verification by BHEL.	
20.5	Contractors shall arrange for the inspection of the works at various stages as required by BHEL. The contractors shall take immediate corrective action for the non-conformances if any, observed and pointed out by BHEL.	
<b>21.0</b>	<b>INTEREST BEARING RECOVERABLE ADVANCE/ MOBILISATION ADVANCE</b>	
21.1	Not applicable.	
<b>22.0</b>	<b>OVER RUN CHARGES</b>	
22.1	Not applicable in this tender.	
<b>23.0</b>	<b>REVISION ON ACCEPTED CONTRACT RATE</b>	
23.1	Not applicable in this tender	
<b>24.0</b>	<b>PRICE VARIATION CLAUSE / ESCALATION</b>	
24.1	Not applicable for this tender	
<b>25.0</b>	<b>LIQUIDATED DAMAGE</b>	
<b>25.1</b>	<b>Intermediate Milestones</b>	
	DELETED	
<b>25.2</b>	<b>Overall Completion</b>	
25.2.1	If the contractor fails to maintain the required progress of work which results in delay in the completion of the works as per the contractual completion period, BHEL shall have the right to impose Liquidated Damage / Penalty at the rate of 0.5% of the contract value, per week of delay or part thereof subject to a maximum of ceiling	

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 29 OF 36

	specified below. For this purpose, the period of delay shall be the delay attributable to the Contractor for the completion of work as per contract. Contract Value for this purpose, shall be the final executed value exclusive of ORC, Extra Works executed, Supplementary / Additional Items and PVC.
25.2.2	If Completion of work goes beyond specified contract period for reasons attributable to the contractor, LD will be imposed with maximum LD amount shall be 10 % of total Executable contract value.
25.2.3	BHEL shall deduct the amount of such compensation from any money due or which may become due to the contractor and/or recover such compensation from the bank guarantees / security deposit of the contractor. To be entitled to impose such compensation, BHEL will not be required to prove that he has incurred such amount as actual damage.
25.2.4	BHEL reserve the right to cancel the order/ contract or a portion thereof at the risk & cost of the contractor and the contractor shall be liable to BHEL for any excess costs thereof.
<b>Note:-</b>	<b>*Executable Contract value-</b> <i>Value of work for which inputs/fronts were made available to contractor and were scheduled for execution till the date of achievement of that milestone.</i>
<b>26.0</b>	<b>GUARANTEE / WARRANTY</b>
26.1	The contractor will be responsible for the quality of workmanship, quality of materials / items and design for which the contractor is responsible.
26.2	Guarantee / warranty period shall be 12 months from the date of completion of work as certified by BHEL Engineer In charge.
<b>27.0</b>	<b>EXTENSION OF TIME FOR COMPLETION</b>
27.1	If the completion of work as detailed in the scope of work gets delayed beyond the contract/ completion period due to reasons not attributable to contractor, the contractor shall make request for an extension of the contract and BHEL at its discretion may extend the contract. However such extension shall not entitle the vendor for price revision or price compensation as this being FIRM price contract.
27.2	Based on review of agreed & jointly signed L-2 / construction schedule (as enumerated in the tender), the balance work at the end of original contract period less the backlog attributable to the contractor shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', the contractor is bound to complete the portion of backlog attributable to contractor. Further 'Time extension' or 'Time extensions' at the end of previous extension shall be worked out similarly.
27.3	However if any 'Time extension' is granted to the contractor to facilitate continuation of work and completion of contract, due to backlog attributable to the contractor alone, then it shall be without prejudice to the rights of BHEL to impose penalty / LD for the delays attributable to the contractor, in addition to any other actions BHEL may wish to take at the risk and cost of contractor.
27.4	A joint program shall be drawn for the balance amount of work to be completed during the period of 'Time Extension', along with matching resources to be deployed by the contractor as per specified format. Review of the programme and record of shortfall shall be done.
27.5	During the period of 'Time extension', contractor shall maintain their resources as per mutually agreed program
27.6	At the end of total work completion as certified by BHEL engineer, and upon analysis of the total delay, the portion of time extensions attributable to (i) Contractor, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 30 OF 36

  

	be exhausted in the same order. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed/ levied for the portion of time extensions attributable solely to contractor after adjusting delay attributable to BHEL& Force majeure and recoverable from the dues payable to the contractor.
<b>28.0</b>	<b>EARNEST MONEY DEPOSIT (EMD / SECURITY DEPOSIT (SD) / PERFORMANCE BOND (PB)</b>
<b>28.1</b>	<b>EARNEST MONEY DEPOSIT (EMD)</b>
28.1.1	<p>EMD is to be paid by tenderers for securing fulfilment of any obligations in terms of the NIT.</p> <p>Tender cost &amp; EMD can be submitted in INR/ USD/ BDT for this tender.</p> <p>Exchange Rate of currency shall be as per Currency Matrix of TCC.</p> <p>Irrespective of submission in any of the aforesaid modes, amount of refund of EMD shall be net of submitted EMD less applicable Bank charges.</p>
28.1.2	<p>EMD &amp; Tender cost amount can also be submitted directly by Foreign Bidders (other than Indian bidders) to the followings Bharat Heavy Electricals Limited bank account in Bangladesh-</p> <p>Bank: State Bank of India</p> <p>Branch :Khulna</p> <p>Address: Dr. Motiar Rahman Tower 64 KDA Avenue, Tetultola Mor, Shibbari Khulna City Corporation, Khulna-9100. Phone: 88-041-721338 (Direct), 88-041-2831345 Ext. 102 Cell: 8801716-138627, Fax: 88-041-733350.</p> <p>A/C No (US \$): 05620257520202</p> <p>A/C No (BDT): :05620257520201</p> <p>SWIFT: SBINBDDH056</p> <p>Routing no:220471543</p>
28.1.3	<p>EMD &amp; Tender cost amount can also be submitted directly by Indian Bidders to the followings Bharat Heavy Electricals Limited bank account in India-</p> <p>1. SBI (Branch Address:-Commercial Branch, Salt Lake, Sector V, Kolkata, Branch Code SBIN0004289), A/C No. 11107800029, INR Account.</p>
28.1.4	Amount of EMD exceeding INR 20 Lakh may be submitted in the form of Bank Guarantee (INR or equivalent USD).

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 31 OF 36
28.1.5	<p>Bidder may also deposit EMD in the form of Fixed Deposit Receipt ( FDR ) issued from the following banks valid for six months, as an additional mode of EMD submission.</p> <p>(a)AB Bank Limited (b)Citibank N.A. (c) Sonali Bank Limited (d)Standard Chartered Bank (e)The Hong Kong Shanghai Banking Corporation Ltd (f)Woori Bank (g) State Bank of India.</p>	
28.1.6	All other terms & conditions shall be as per GCC.	
28.2	SECURITY DEPOSIT(SD)	
28.2.1	The total amount of Security Deposit will be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.	
28.2.2	<p>At least 50% of the required Security Deposit, including the EMD, shall be collected in before start of the work. Balance of the Security Deposit shall be collected by deducting 10% of the gross amount in USD progressively from each of the running bills of the Contractor till the total amount of the required Security Deposit is collected.</p> <p>If the value of work done at any time exceeds the contract value, the amount of Security Deposit shall be correspondingly enhanced and the additional Security Deposit shall be immediately deposited by the Contractor or recovered from payment/s due to the Contractor.</p> <p>The recoveries made from running bills (cash deduction towards balance SD amount) can be released against submission of equivalent Bank Guarantee in acceptable form, but only once, before completion of work, with the approval of the authority competent to award the work.</p>	
28.2.3	All other terms & conditions shall be as per GCC.	
<b>28.3</b>	<b>PERFORMANCE BOND</b>	
28.3.1	Performance bond is not applicable.	
<b>29.0</b>	<b>CERTIFICATE TOWARDS COMPLETION</b>	
29.1	The work under the scope of the contractor shall be deemed to have been completed in all respects only when so certified by BHEL / owner. The decision of BHEL in this regard shall be final and binding on the contractor.	
<b>30.0</b>	<b>CIVIL LABORATORY</b>	
30.1	DELETED	
<b>31.0</b>	<b>CONSTRUCTION SCHEDULE</b>	
31.1	Entire work shall be carried out in accordance with the broad construction schedule given in 10.1, within the stipulated completion period. Within 30 days from start of work, the contractor shall discuss with BHEL site engineer & furnish detail construction schedule (L-3/ L-4) indicating all milestones on the basis of major activities and get it approved from BHEL engineer. This schedule will undergo review and based on progress vis-à-vis project requirement, contractor shall have to submit revised schedule for approval of BHEL.	
31.2	The contractor shall plan his work in such a manner so as to meet the overall project schedule, in consultation with BHEL / BIFPCL engineer.	
31.3	Contractor shall submit daily work program based on above construction schedule. Deferment of above schedule is not acceptable. Contractor will adhere to schedule and resource planning to be augmented to ensure completion as per schedule.	

31.4	Periodic progress reviews on the entire activities of execution in respect of supply & works in scope of contractor will be held once in a month at Kolkata / site. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.	
31.5	Above schedule is indicative. The contractor shall plan his work in such a manner so as to meet the overall project schedule, in consultation with BHEL/BIFCL Engineer.	
<b>32.0</b>	<b>PAYMENT FOR ADDITIONAL/EXTRA ITEMS FOR WORKS</b>	
32.1	It shall be as per relevant clause of the GCC.	
<b>33.0</b>	<b>Deleted</b>	
<b>34.0</b>	<b>TOOLS &amp; PLANTS (TO BE PROVIDED BY CONTRACTOR)</b>	
34.1	Tentative list of T&P to be deployed by contractor for successful completion of work is detailed below. No T&P shall be provided by BHEL	
34.2	It may be noted that the list is not exhaustive and is only for general guidance. The contractor is required to provide all necessary T&P (other than those specified to be provided by BHEL, if any) measuring (calibrated) instruments & handing equipments to maintain work progress for timely completion of total work as per contract. In case of project requirement, some activities may have to pre-pone. In such cases the contractor may have to deploy additional T&P. Quoted rate shall be inclusive of such emerging requirements. However, contractor shall submit deployment plan of all T&P along with tender bid.	
34.3	In the event of any failure on the part of the contractor to deploy T & P to sustain desired work progress, BHEL may at his discretion also terminate the contract on this ground and take out any or whole amount of the contract from the scope of the contractor. In the event of failure of contractor to deploy necessary and sufficient T&P/ IMTEs to maintain work progress, BHEL will be at liberty to arrange the same at the risk & cost of contractor including transportation cost of same from any of BHEL site/ other agency & charges as applicable shall be deducted from contractor's RA bill. Decision of BHEL in this regard will be final & binding on contractor.	
34.4	Following Major T&Ps to be arranged by contractor within the indicated time	
	<b>Major T&amp;P items</b>	<b>Deployment Schedule</b>
34.4.1	1 No. Hydraulic Excavator	As per requirement
34.4.2	1 no. dozer	As per requirement
34.4.3	2 No. dumper	As per requirement
34.4.4	1 no. vibromax /earth compactor	As per requirement
34.4.5	4 Nos. Concrete Breaker	As per requirement
34.4.6	1- Crawler crane of 50 T capacity & 1- Telescopic boom crane of 50 T capacity.	As per requirement
34.4.7	1 no hydra (10 / 12 T capacity) or equivalent	Within 15 days from start of work (As per requirement)
34.4.8	Welding rectifier (as per requirement)	Within 15 days from start of work
34.4.9	2 Nos. transit mixer (4.5/5/6 M3 capacity)	As per site requirement
34.4.10	1 no. concrete pump (20 cum/ hr. min capacity)	As per site requirement



34.4.11	2 Nos. self-priming dewatering pump 10 HP (diesel/ electric)	As per site requirement
34.4.12	1 No. self-priming dewatering pump 20 HP or higher(diesel/ electric)	As per site requirement
34.4.13	1 Nos. reinforcement bending machine	As per site requirement
34.4.14	1 No. reinforcement cutting machine	As per site requirement
34.4.15	Deleted	
34.4.16	5 Nos. Concrete vibrator with adequate needle (5 Nos.. diesel driven + 5 Nos.. electric driven)	As per site requirement
34.4.17	1 No. total station	As per site requirement
34.4.18	2 Nos. auto level & staff	Within 15 days from start of work
34.4.19	1 No. DG set 180 KVA	Within 15 days from start of work
34.4.20	Deleted	
34.4.21	1 no drinking water tank – 2000 lit.	Within 15 days from start of work
34.4.22	Deleted	
34.4.23	1 no low bed trailer of 20T capacity	As per requirement
34.4.24	Deleted	
34.4.25	Power winch – 5T - 3 nos for structural erection.	Within 25-days from start of work .
34.4.26	Power winch – 3T – 2 no for structural erection.	Within 25-days from start of work .
34.4.27	Power winch – 10 T - 2 nos for structural erection	Within 25-days from start of work .
34.4.28	Passenger winch	As per requirement
34.4.29	2 no multi stage high lift water pump (for curing) (lifting height shall be 300 metre). One shall be working and other will be stand by.	As per requirement
34.4.30	Approach arrangement of concrete Rail system	As per requirement
34.4.31	Minimum staggering Pipe – 5000RM, Clamp – 2500Nos, Shuttering board/plate – 500 Sqm	As per requirement
34.4.32	Deleted	
34.4.33	Portable fire extinguishers as below: Soda acid – 1 set. Dry chemical powder – 1 set CO2 – 1 set. Water & sand bucket (4 buckets in one stand) – 1 set. Fire hose with nozzle (50 M length) – 1 set	Within 15 days from start of work
34.5	T&P shown in the above mentioned list are tentative based on planned progress requirement. Actual Mobilization schedule, based on front availability, drawings, construction schedule and material availability at site is to be reviewed and mutually agreed with CM, BHEL site periodically from time to time for mobilization of major T&Ps, and the	

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 34 OF 36

	<p>same have to be adhered to. No change will be permitted without written approval of Construction Manager, BHEL site.</p> <p>Further requirement will be reviewed time to time at site and contractor will provide additional T&amp;P/equipments to ensure completion of entire work within schedule time without any financial implication to BHEL. All other T&amp;Ps shall be provided by the contractor without any extra cost to BHEL. Vendor will give advance intimation &amp; certification regarding capacity etc. prior to dispatch of heavy equipments.</p>
34.6	All T&P and all IMTEs, which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by the contractor at his own cost in working condition.
34.7	In the event of non mobilisation of any T&P by the successful bidder and as a result progress of work suffered, BHEL reserves the right to deduct suitable amount from the dues of the bidder, with assigning reasons thereof at the following rates
<b>35.0</b>	<b>OTHER TERMS</b>
35.1	All other term & conditions of this specification shall be governed by the pertinent provisions of GCC and other volumes of this tender, as applicable.

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 35 OF 36

**ANNEXURE B**

**HSE REQUIREMENTS-MAITREE PROJECT**  
**MANPOWER AND INFRASTRUCTURE**

<b><u>SL NO.</u></b>	<b><u>ITEM</u></b>	<b><u>REQUIREMENTS</u></b>	<b><u>REMARKS</u></b>
1	Shift HSE Officer	Min 1 for every 500 workers or part thereof.	Candidate should have <ul style="list-style-type: none"> <li>• Degree/ diploma in Engg/Technology</li> <li>• Degree/ Diploma in H&amp;S, min 2 years' experience in field of safety for Degree holder in Engg or Min 3 years with Diploma holder in Engg</li> </ul>
2	Shift HSE stewards	Min 1 Steward for every 100 workers or part thereof. Deployment to be approved by BHEL HSE manager.	Candidate should have passed HSC(12 <sup>th</sup> standard) and attended a certificate course on construction safety or allied subjects
3	First aid box	1 in each office and major work area/floor	Items as per clause 76(2) of Bangladesh labour Rules and clause 7.4.5.3 of HSE plan for sub-contractors
4	Walky-talky	If contractor engaged in height works- 1 No.	
5	Binoculars	If contractor engaged in height works- 1 No.	
6	Height Rescue-kit	If contractor engaged in height works- 1 No.	

TENDER NO – PSER:SCT-KLN-C1865A:22:09:01		
	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 36 OF 36

### **Special Notes:**

1. The following welfare measures, in addition to those covered above, are to be taken at the site :
  - a. Adequate Drinking Water
  - b. Adequate no of toilets and washing area
  - c. Canteen
  - d. Rest Shed
  - e. Hygienic Accommodation (Labour Colony) and allied facilities
2. Water sprinkling arrangement for suppression of dust to be made
3. A Safety Park will be put up with participation by all major contractors
4. It must be ensured that no contaminated water including those discharged from Toilets, Canteen, Office and Labour Colony shall be discharged to under-ground water table and river water
5. AS THIS SITE IS LOACTED IN A CYCLONE-PRONE AREA, ALL BUILDINGS AND SHED MUST BE CONSTRUCTED STRONG ENOUGH TO WITHSTAND ADVERSE WEATHER CONDITION
6. FURTHER TO POINT # 5, MASS EVACUATION OF PEOPLE FROM SITE MAY BE CALLED FOR, IF ADVISED SO, BY GOVT AGENCIES. AS IT WILL BE EXTREMELY DIFFICULT TO FIND A REST SHELTER FOR A FEW THOUSAND PEOPLE, IT IS FURTHER EMPHASISED THAT ACCOMMODATION MUST BE STRONG ENOUGH TO SURVIVE SUCH EXTREME WEATHER CONDITION.
7. BHEL shall provide drawing for labour accommodation and contractor shall construct the same in line to BHEL drawing with contractor's own contribution/expenses.
8. It is assumed that First aider will be sitting in a porta-cabin.
9. The initial shelter in labour colony for one month till Vendor is able to construct their own labour accommodation may be available in the existing colony on rental basis , based on availability in the existing labour colony.
10. Adequate Quarantine Facility for isolation of workmen of 14 days during induction is to be arranged by the Bidder due to Pandemic COVID-19.All sort of sanitization , hand gloves, nose mask social distancing at labour colony is to be maintained and ensure due to pandemic of COVID-19 as per SOP attached with this Tender. It shall be in practice till such time as demanded by Project Authorities.