



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 02

Ref: PSER:SCT:BAR-M1979:TCN-02

Date: 20-08-2019

Sub	Tender Change Notice (TCN) - 02	
Job	Material Management work, consisting of receipt, unloading, handling, verification, storage, issue, record maintenance, etc of materials of FGD system & its auxiliaries, electrical system, control & instrumentation system, non-BHEL system, steel, cement, construction equipments, miscellaneous items etc. for 5 x 660 mw BARH stage- I & II, STPP.	
Ref	1.0	Tender no PSER:SCT:BAR-M1979:19
	2.0	BHEL's NIT, vide reference no PSER:SCT:BAR-M1979:7463 Date: 01-08-2019.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:BAR-M1979:TCN-01 Date: 12-08-2019
	4.0	Other References, if any.

With reference to above, following points/ documents, relevant to tender, may please be noted and complied with while submitting offer.

- 1) Revised "VOLUME-IF-TCC-CML-R-01 is attached herewith, superseding VOLUME-IF-CML-R-0 issued earlier along with NIT (Refer Clause No. 38.6). However, bidder shall go through entire volume of tender before submitting their bid.
- 2) Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder shall submit no deviation certificate as per enclosed format only.
- 3) All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

Sr. Engineer (SCT)

Encl: As Above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SECTOR-II, SALT LAKE CITY, KOLKATA - 700 091

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

CLAUSE NO	DESCRIPTION
1.0	<p><u>PROJECT SYNOPSIS AND GENERAL INFORMATION</u></p> <p>Project name: BARH SUPER THERMAL POWER PROJECT, STAGE-I & II No. of Units x capacity: 3 X 660 MW & 2 X 660 MW Project setting up by: National thermal Power Corporation Project Location : (i) Place: BARH : (ii) District: PATNA : (iii) State: BIHAR Nearest Railway station: BARH Distance of project location from the Railway station: 3.0 KM (Approx.) Nearest town: BARH Distance of the town from the Project site: 4.0 KM Nearest Commercial Airport: PATNA Distance of airport from the project site: 75 KM. Nearest Road Head : National Highway-31.</p>
2.0	<p><u>SITE VISIT</u></p> <p>The bidder should visit project site and acquire full knowledge & information about the conditions prevailing at site and in & around the plant premises, together with all statutory, obligatory, mandatory requirements of various authorities before submission of offer.</p>
3.0	<p><u>NAME OF WORK</u></p> <p>Providing required manpower including supervision, tools & plants, consumables etc. for doing the material Handling work including material unloading, loading, verification, shifting, re-shifting, transportation, stacking, re-stacking, conservation & preservation as required, quick identification of location & issuance of material to erection agency of BHEL, maintaining of records and report generation as per the requirement of BHEL through soft and hard copy etc of FGD System along with auxiliaries & electrical system, equipments of control & instrumentation system, non-BHEL supply items, construction equipments, miscellaneous items, like furniture & office equipment etc brought to site by BHEL etc. and Civil materials viz. Cement, Steel etc., as per specification and terms & conditions of tender for both the Stages i.e. Stage-I (3X660 MW) & Stage-II (2X 660 MW) at Barh STPP.</p>
4.0	<p><u>SCOPE OF WORK</u></p>
4.1	Unloading, Reloading the materials/ equipment received, wherever required, to trucks/ trailers etc and transportation to stores/ storage yard/ work site at subject project, unloading and stacking at site stores/storage yard/ work site in line with BHEL storage manual and as per the instruction of BHEL engineer.
4.2	For storage of these materials, open store yard, covered and semi-covered store shed will be provided by BHEL as per availability.
4.3	The contractor shall maintain computerised records for receipt of materials, issued to BHEL's vendors and return by BHEL's vendors in BHEL standard format/BHEL computerised system like (ISCMS/E-store etc). Monthly report shall be produced by contractor and Suitable soft & hard copy be maintained as a back up.
4.4	The contractor shall raise MDR & monthly MIR pertaining to material management in consultation with BHEL engineers.
4.5	The contractor shall raise insurance claim in case of damage, short supply, theft or any other cause in consultation with BHEL engineers and assist during survey work by the surveyor of insurance company.

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4.6	The contractor shall stack the materials as per grid plan of BHEL, maintain proper 'house keeping', maintain and upkeep entire storage area and passage for smooth material handling as per BHEL instructions.
4.7	The contractor shall strictly abide by the state and central laws, statutory rules, regulations etc. as indicated in GCC booklet. In addition, the contractor shall have to comply with the PF regulations etc. for all his employees/workmen as per the local authorities/Governing bodies instructions. Compliance with statutory obligations as well as any other requirements/provisions with respect to contractor's manpower, equipment including insurance, medical facilities, minimum wages, safety requirements, accommodations etc., are the responsibility of the contractor.
4.8	Verification of components, including opening of cases if required, re-packing and stacking them after verification as per instruction of BHEL Engineers at site & submission of detailed report. The scope of all handling during above activities and re-handling (re-stacking/ re-shifting) is also applicable for the verification activity.
4.9	The tentative break up of tonnage, in terms of scope of work shall be as per relevant annexures.
4.10	In case, the storage yard/ store is not ready, the materials/ equipment shall be unloaded and stacked in transit storage as advised by BHEL, and later it will be transported, unloaded and stacked in the store yard/ store by the contractor under scope of re-handling (re-shifting/ re-stacking).
4.11	Under the scope of this contract, it shall be the responsibility of the contractor to provide facilities to open the package in the presence of BHEL Engineer, verifying the same, re-packing wherever and whenever required, properly stacking them as may be directed by BHEL, so as to facilitate proper handling, receipt position, stock taking etc. The rate quoted by the bidder shall be deemed to have included such provisions.
4.12	All materials/ equipment shall be stacked and stored above ground level by the use of concrete or wooden sleepers as per instruction of BHEL Engineer. No materials shall remain on ground at any time. Materials shall not be stacked in low lying areas where it is likely to get flooded during rain. All tarpaulins required for stacking the materials shall be provided by contractor within the quoted price at his cost, however BHEL will provide approx. 5000 nos. of concrete sleeper free of cost during execution based on the availability & requirement of the vendor. However, all the sleepers shall have to be returned when not in use and after completion of work with good condition.
4.13	Stacking of the material shall be done as per the instructions and to the satisfaction of BHEL/ customer engineers. The material shall be so stacked that it should facilitate easy handling during the erection. Any negligence or improper stacking may force BHEL to get the job done by other agencies at the risk and cost of the contractor.
4.14	Normally all the materials which are to be kept in covered/ semi-covered stores, should be shifted to their respective places immediately after unloading as per advice of BHEL engineer at site.
4.15	All the necessary lifting tackles, tools and plants including Cranes (other than those to be provided by BHEL as mentioned elsewhere in this tender document) tractors, trailers, lorries, trucks, pulley blocks, jacks, winches, wire rope etc of suitable capacities etc. and other equipment incidental to carry out this work shall have to be arranged by the contractor himself at his cost.
4.16	BHEL engineer reserves the right to inspect lifting tackles and equipment before allowing their use. Such approval however, shall not relieve the contractor of his responsibility to ensure safe handling of equipment taking due precautions to avoid any accident and damage to other equipment and personnel.
4.17	All hardware such as rails, maxpuller etc, required for dragging or for any other connected works shall be arranged by the contractor at his own cost.

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4.18	The contractor shall help the erection agency of BHEL to identify the location of the material within 48 hrs from requisition. He will also issue the material to the erection agency of BHEL, and record the issue in register as per BHEL format. Collection of the issued material is excluded from the scope.
4.19	The contractor shall execute the work in the most substantial and workman like manner. The store shall be, handled with care and diligence. Any loss to BHEL due to contractor's lapses shall have to be made good by the contractor. All surplus, damaged, unused materials, package materials/ containers, gunny bags etc. shall be returned to BHEL.
4.20	If the contractor or his workmen break, deface, injures or destroy any part of building, road, kerbs, fence enclosures, water pipes, drains, electric/ telephone poles or wires, trees or any other property or damage any part of erected stores, stored components etc. the contractor shall make the same good at his own expenses (of which BHEL site engineer's decision shall be final) failing which the site engineer shall get the same rectified by other agencies at the risk and cost of the contractor and the same shall be deducted from the sums that may be due then or at any time thereafter become due to the contractor or even from his security deposit.
4.21	All the riggers, sarangs, etc engaged for the work should have adequate experience, which should be supported by documentary evidence, if called for.
4.22	The weights of components, to be handled, as indicated in Annexure-II are tentative and are subject to variations to any extent.
4.23	Upkeepment, maintenance and conservation of material (to be executed on man hour rate basis under preservation) during storage period and till issue to erection contractor shall be included in the contractor's scope as broadly explained below.
4.23.1	Removal of stored material from boxes/crates, identification, cleaning/ conservation and replacing Boxes/crates and stacking on floors/racks as required under the BHEL store requirement as per the preservation manual/ site engineer's instruction.
4.23.2	Cleaning of corroded surfaces by rubbing with recommended grades of emery papers, removing the conservative greases, damaged coatings of paints or varnish, cleaning/ washing of surfaces as required and re-application of anti corrosive paints, protective grease etc as prescribed by BHEL.
4.23.3	Wherever end caps are found missing, these pipes/ tubes are to be cleaned with compressed air and replacement of protective pellets and end caps to be done. End caps and protective pallets required for pipes shall be provided by contractor free of additional charge.
4.23.4	All electrical/ C&I panels, motor bearings, slip rings, commutators and other exposed parts shall be protected against moisture ingress and corrosion during storage and inspected periodically. Heavy rotating parts in assembled conditions shall be periodically rotated after ensuring proper lubrication to prevent corrosion due to prolonged storage.
4.23.5	The preservation painting shall be done as per the advice of BHEL engineer and shall normally consist of three operations, e.g. priming, putting and final painting. Coating of paints or varnish shall be done either by spray gun or by brush or by dipping as the case may be.
4.23.6	Parts conserved by grease shall be additionally protected by wrapping with two layers of paraffin paper wherever advised. Contractor will provide paraffin papers free of additional charge.
4.23.7	While applying the anticorrosive layer, by any of the above methods, care shall be taken that the coating is uniform and without overflow and gaps.
4.23.8	The process of preservation painting and re-conservation of surfaces shall be done by experienced workers and supervisors.
4.23.9	Total scope of work for preservation/ conservation of materials, as per BHEL instruction/procedure is included in the scope of work, payment will be made as per applicable rate schedule. Monthly programme of the materials to be conserved will be given by BHEL in the beginning of every month. Contractor can not claim any compensation for any increase/ decrease in the scope of work under such monthly

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	programme. The contractor shall inspect all consignments once in every four months or the period advised by BHEL site engineer to ensure that they are in proper order. After inspection, parts and sub assemblies shall again be re-conserved and packed as before, if required. However, service of only inspection of the consignment shall be deemed to have been included in the rate quoted by the bidder.
4.23.10	Preservatives and consumables like paints, greases, varnish, thinners for paints, silica-gel, white spirit, paraffin paper and all other preservatives and consumables, required for upkeepment, maintenance and preservation/ conservation work shall be provided by contractor at his own cost. A tentative list of such preservatives and consumables is given in relevant annexure of the tender.
4.23.11	All the necessary tools & plants and equipment (except those mentioned to be given by BHEL free of cost as per relevant annexure of the tender), including operator, fuel, consumables etc. for running the same, required for the above job of upkeepment, maintenance and preservation/ conservation work shall be arranged by the contractor at his own cost.
4.23.12	The age of the cranes to be deployed should not be more than 12 years.
4.23.13	BHEL may utilise the above T&P for other purpose apart from material handling.
4.23.14	For other T&P as per Annexure IV and any other Item required for carrying out the job, no separate payment shall be made and deployment of same will be within quoted rate.
5.0	DEVIATIONS/CLARIFICATIONS
	The bidder is required to submit with his offer in the relevant schedule/ format without any ambiguity. Any assumptions, presumptions, deviations etc indicated or implied anywhere by the bidder except those indicated in the deviation schedule/ format will not be recognized and will not form a part of consideration/ offer. In the absence of such filled-up schedule/ format it will be understood and agreed that the bidder's offer is based on strict conformance to the specification and no negotiation would be allowed in this regard. BHEL reserve the right not to recognize any/ all deviations submitted after opening of the bid.
6.0	DEWATERING
	Contractor shall ensure at all times that 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.
7.0	LABOUR AND SUPERVISORY STAFF
7.1	The contractor shall engage specially skilled labour eg sarangs, riggers, etc and khalasis for works under this contract.
7.2	The contractor shall provide adequate number of supervisory staff for carrying out job under this contract. The supervisory staff employed by the contractor should be familiar with BHEL material identification pattern. The contractor shall ensure proper out turn of work and discipline on the part of labour put on the job by the contractor. They will also in general see that the works are carried out in a safe and proper manner and in co-ordination with labour and staff employed directly by BHEL or other contractor of BHEL or customer.
7.3	It will be the responsibility of the contractor to ensure safe lifting of the equipment/material taking due precautions to avoid any accident and damage to other equipment and personnel. He shall be liable for all accidents, damages, etc to personnel and equipment etc. during the execution of the work by the contractor.
8.0	RESPONSIBILITIES OF THE CONTRACTOR UNDER THE SCOPE OF WORK
8.1	It would be the responsibility of the contractor to keep in touch with BHEL authorities at site to find out the arrival of the consignments. The railway/ transport receipts for the consignments shall be handed over to the contractor immediately on receipt.
8.2	The contractor is required to find out from railway/ transport authorities, regarding consignment arriving prior to receipt of railway/ transport receipts, if any and take delivery of the same on 'Indemnity Bond', which should be got signed by BHEL/

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	purchaser as required.
8.3	It would be the responsibility of contractor, to examine the packages, consignments etc on arrival and bring to the notice of railway/ transport authorities and BHEL authorities the loss/ damages, if any, observed in the consignments. Before taking delivery, particularly of consignments in "smalls", the weight of the same will be checked with the invoiced weight & any discrepancies shall be reported immediately to BHEL/ transport authority/ railway. It would be the responsibility of the contractor to sign on the delivery book/ acknowledgement slip of railway/ Transport authority after taking delivery of the consignment.
8.4	Any discrepancy/ shortage/ damage found in the consignment after taking delivery and giving clear receipt to the carriers, would be the responsibility of the contractor and the amount liable to be lost by BHEL on such accounts is recoverable from the contractor, as per the calculation of amount of such loss made by BHEL.
8.5	In case of apparent damages/ shortages to/ in consignment packing or any transhipment noticed by the contractor, such cases shall be brought to the notice of BHEL and cleared only with their knowledge/ approval.
8.6	Wagon/ truck/ trailer coming on Sunday and holidays, are also required to be handled by the contractor. Since the offices and go-downs will probably remain closed on these days, it will be the responsibility of the contractor to contact the site engineer or the authorised representative of BHEL at their residence and obtain instructions.
8.7	Only non-ODC consignment (as per Indian railway's definition) is envisaged to be despatched through wagon.
8.8	BHEL reserves the right to recover from the contractor any loss, which arises out of undue delay/discrepancy/ shortage/ damage/ theft/ pilferage or any other causes during transit between the Railway siding/ transporter's go-down/ material receiving point and BHEL stores/ storage yard/ work site or during verification, stacking or at any time in the custody of the contractor.
8.9	Unloading from wagons/trucks/trailers, re-loading, transportation, unloading at storage yard/ store/ work site of heavy/ sophisticated equipment shall be done as per the directions of BHEL's engineer and in his presence, if required.
8.10	Certain packages are likely to be received by passenger trains. The relevant parcel way bills also are to be handed over to the contractor for clearing the same from the railway parcel office. It is the responsibility of the contractor to clear the same at the railway station, transport and hand over to BHEL authorities at site, and is under the scope of this contract. Consignment coming by road, are also to be cleared similarly. The distance of railway station and the transporter's godown from site will be with in approx 10 (Ten) kms 20(Twenty) kms respectively.
8.11	Any demurrage payable to railways or transporters for any delay in clearing the goods due to any fault on contractor's part shall be borne by the contractor. The decision of BHEL 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.
8.12	Complete list of T&P/ equipment which shall be provided by contractor, is to be furnished in detail with the tender (in line with relevant annexure of GCC).
8.13	It will be the responsibility of the contractor to collect the used road permits from driver of truck/ trailer, as applicable and hand over to BHEL site office through format as given in relevant annexure of tender.
9.0	GENERAL
9.1	The contractor will make his own arrangement for his communication needs at his site office or residential area/labour colony.
9.2	It may be required to keep separate cranes at various receipt points for loading/ unloading of materials specially for materials received by rail. All T&Ps, lifting tackles and pulling devices to be deployed by the contractor must bear valid/ latest test certificates for their suitability and the documents shall be preserved at site. The contractor shall ensure deployment of reliable and calibrated instrument, measuring and test equipments (IMTE). The IMTE, as required for the job, shall have valid test/

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	calibration certificate from authorised/ Govt approved agencies. The contractor shall also keep provision of alternate arrangement for such IMTE so that the work does not suffer when a particular IMTE is sent for calibration. Re-testing/ re-calibration shall also to be arranged by the contractor at their own cost at regular interval during the period of use as advised by BHEL.
9.3	The contractor shall submit a list of various tools, plants, material handling equipment etc being provided by them, to the Construction Manager, BHEL site before taking up the work in hand. The above items shall be deployed by the contractor after taking prior approval of the Construction Manager with respect to their suitability and quality. These equipments shall not be removed from site without the written permission of the Construction Manager, BHEL site.
9.4	In event of any failure on the part of the contractor in providing necessary T&P etc, BHEL may at its discretion also terminate the contract on this ground and take out any or whole amount of the contract from the scope of the contractor. Decision of BHEL in this regard will be final and binding on the contractor.
9.5	All consumables required for the work shall be provided by the contractor at his own cost. However, the tentative list of consumables to be provided by the contractor is given in relevant annexure of the tender. The consumables supplied by the contractor shall be subject to prior approval of BHEL.
9.6	The contractor shall provide necessary first aid facilities for all his employees, representatives, and workmen working at site.
9.7	During the period of contract, the contractor shall be responsible for keeping the entire area allotted to him clean and free from rubbish debris etc to entire satisfaction of BHEL. The contractor shall provide proper sanitary arrangement in the work area & office.
9.8	Work procedures that are to be used during the work shall be such, as to minimise fire hazards to the extent practicable. Combustible materials, waste and rubbish shall be collected and removed from the site, at least once in every week.
9.9	All contractor's supervisory personnel and sufficient number of workers shall be trained for fire-fighting and shall be assigned specific fire protection duties.
9.10	Contractor shall provide & maintain enough of fire protecting equipment of the types and number for their office & work premises and BHEL office & stores. Access to such fire protection equipment is to be given at all times. Compliance of the above requirement under fire protection shall in no way relieve the contractor of any of his responsibility and liabilities to fire accident occurring either to his materials, man and equipment or to those of other's working in the area.
9.11	The contractor shall have total responsibility for all materials in his custody, and shall ensure protection of all materials from theft, fire, pilferage and any other damage and loss. The contractor shall make suitable and adequate arrangement to ensure the above, by deploying security personnel.
9.12	In case of theft of material from store/ storage yard under his custody, contractor shall lodge FIR with the Police Station (PS) so that Insurance Company does not turn down the claim. In the event of non-admittance of the claim by Insurance Company due to non-availability of FIR, BHEL reserves the right to recover the Loss suffered from contractor's bills based on the merit of the case.
9.13	The contractor shall be responsible to ensure that none of the personnel move beyond the areas marked out for his operation. In case of a need for the contractor's personnel to move beyond the area marked for him, the same shall be done with a written permission of the construction manager.
9.14	Contractor shall be responsible for examining all the shipment and notify the BHEL engineer immediately of any damage, shortage, discrepancies etc for the purpose of engineer's information only. The contractor shall submit to the engineer a report detailing all the receipts after actual receipts of consignments. However, the contractor shall be solely responsible for any shortage or damage after giving a clear receipt to railway/ transport companies, and for shortages/ damages during transit from material receipt/ unloading point to stores/ storage yard/ work site.
9.15	The contractor shall maintain an accurate and exhaustive record detailing out the list

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	of all materials/ equipment received by him and keep such records both in hard copies and also in soft copies in BHEL Computerised system (ISCMS/E store as applicable) ready for the inspection of the engineer at any time.
9.16	The materials/ equipment which are stored in the open or dusty location and required to be covered must be covered with suitable weatherproof and flameproof covering materials wherever applicable at any number of times at no additional cost. Such weatherproof/ flameproof covering which gets worn out from uses should be replaced periodically as per instruction of BHEL engineer at no additional cost. In no occasion, this work can be linked with preservation. All materials/ equipment shall be handled very carefully to prevent any damage/ loss. No bare wire ropes/ slings etc shall be used without the specific approval of BHEL.
9.17	If the materials/equipments belonging to the contractor are stored in areas other than those earmarked for him, the engineer will have the right to get it shifted to the area earmarked for the contractor at the contractor's cost.
9.18	For completion of work, the contractor may have to work in one or more shifts. He will not be eligible for any extra charges on account of this.
9.19	All the contractor's employees shall carry identification cards/gate passes while working at site.
9.20	The contractor, during execution of the work under scope, shall take utmost care in preserving the identification marks/tags as available on the materials.
9.21	Although all tools and plants of suitable capacities required for timely and safe completion of work under the specification shall be provided by the contractor at his own cost, based on contractor's demand (depending upon load to be lifted or approach availability at site), BHEL will provide free of cost as per relevant annexure of the tender including operator as available, and consumables except fuel, suitable crane on shared basis for material handling. However, such requirement shall be intimated in writing by vendor suitably to the construction manager. Daily routine maintenance, monthly servicing of crane etc. of BHEL, will be under the scope of BHEL. Provision of T&Ps by BHEL shall be subject to following.
9.21.1	Actual use of T&P including marching as per entry in log-book duly certified by BHEL engineer shall be considered for calculation of overtime charges.
9.21.2	The contractor shall be responsible for the safe and proper use of T&P issued to him. Any loss/ damage to any part of the above T&P, for reason attributable to the contractor shall be to his account. In case contractor fails to make good the loss, and expenditures on these account will be recovered from contractor's bills. BHEL's decision in this regard shall be final and binding on the contractor.
8.21.3	The contractor shall have to return the above T&Ps at the earliest in good working condition, subject to normal wear & tear.
9.21.4	T&P issued shall be used only for the designated scope of work under specification.
9.21.5	If at any time, it is noticed that contractor is not using any of the T&Ps properly according to the instruction of BHEL, BHEL will have the right to withdraw any and all such T&P and any cost due to this shall be to contractor's account.
10.0	AREA REQUIREMENT
	The contractor shall furnish the estimated area required for the construction of his office etc separately (based on BHEL's customer's design), in their technical bid. The same will be reviewed by BHEL and allotted to the extent available/ considered necessary, depending upon the area availability. Contractor shall also have to arrange the watch and ward of its office within the quoted price.
11.0	PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT
	To meet the need of construction management at site, contractor shall provide the following services within quoted/ accepted rates.
11.1	PLANNING & MONITORING AND COMPUTERISED MATERIAL MANAGEMENT
11.1.1	The bidder shall prepare detail program (L-3) as per completion dates given in this document. This schedule must include the tentative dispatch schedule from all manufacturing units shall be made available to the bidder as & when available). This program 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

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	basis whenever required by BHEL.
11.1.2	<p>The bidder will have to provide following for exclusive BHEL usage:</p> <ol style="list-style-type: none"> 1) Install 2 nos PCs (multimedia PC work station Pentium i3/i5, with a processor of 1 GHz or above, Min 160 GB HDD, 3 GB RAM, 100/1000 MBPS LAN card) of CL/HP/DELL or equivalent make with Window 7 O/S and required software like MS Office 2010 Professional, AutoCAD 2010 or higher, PageMaker (7.0) etc, Adobe Pdf Creator 2) One no laserjet printer (HP or equivalent) compatible for A4 size printing (ink/ cartridge for which to be supplied as and when required) with power backup at places, as per instruction of BHEL for exclusive use of BHEL. <p>These computers/ printers shall remain contractor's property and they will be allowed to take out the same after completion of the site works (including extended period, if any). The contractor shall provide data / information etc in prescribed formats for periodical updating of the progress reports, material management reports, updating of network pertaining to the contractor's scope of work etc.</p> <p>The contractor shall also provide following persons, beyond their own staff, for exclusive BHEL works: -</p> <ul style="list-style-type: none"> • One no. computer operators and • Two nos service staff <p>Above is required for miscellaneous service for BHEL's use at site/ Kolkata /etc. for reconciliation, progress review & day-to-day planning purpose, documentation etc. These facilities are to be provided within 15 days from the start of work till completion of site works or as decided by BHEL. If contractor fails to provide computer/ printer or personnel as per requirement, for a continuous period of fifteen days or more, BHEL shall have the right to deduct the amount as per following rates on prorata basis, from contractor's RA bill or any other dues.</p>
11.1.2.1	@ Rs 15,000/- (Fifteen thousand)/ month for each computer operator or at actual (rate +30%) if BHEL arranges this facility, whichever is lower.
11.1.2.2	@ Rs 12,000/- (Twelve thousand) / month for each service staff or at actual (rate +30%) if BHEL arranges this facility, whichever is lower.
11.1.2.3	@ Rs 12,000/- (Twelve thousand)/ month for each computer/printer or at actual (rate +15%) if BHEL arranges this facility, whichever is lower.
11.1.3	In the event of the contract period getting extended beyond the stipulated contract period for reasons not attributable to the bidder, the bidder will be reimbursed at the mentioned rate above at sl no 11.1.2.1 & 11.1.2.2 or (actual+5%), whichever is lower, if the services of operator/service staff are being used by BHEL however no any extra patment shall be done for providing of computer/printer during the period extended beyond the stipulated contract period.
11.1.4	The contractor's site office must have facilities of communications like Fax, E-mail, and telephone with STD facility within a month from start of work.
11.2	PROGRESS REPORTING
11.2.1	The bidder shall submit daily, weekly and monthly progress reports for work force, materials reports, consumables (gases/ electrodes) report and other reports as per pro-forma considered necessary by the BHEL. In case of any failure on contractor's part to comply with this, BHEL may at its discretion, consider to withhold part payment against their RA bills.
11.2.2	<p>The progress report shall indicate the details of material received at site and issued to various contractors at site as per BHEL agreed format.</p> <p>The contractor should also inform the progress achieved against requirement with reasons indicating delays in unloading/stacking/issue of material, if any, and shall give the remedial actions which the contractor intends to take to avoid such delay in future.</p>
11.2.3	Contractor shall also provide a report on daily basis on trailers/trucks arrival on daily basis. The report will show the list of all the trailers pending unloading with the date

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	of reporting at site. A consolidated report on trailers shall be submitted on monthly basis having date wise details of unloaded & reported trailers. Such report format shall be finalised in consultation with BHEL site engineer.
11.2.4	Contractor shall also provide a report on daily/weekly basis on MDR. The report will show the detail of issue against each MDR case. Reconciliation of all MDR report shall be done on weekly/ monthly basis, as directed by site engineer, and such report shall be submitted at site.
11.2.5	The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged.
11.2.6	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.
11.2.7	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.
11.2.8	Successful bidder has to provide for electronic/ computerized storing and re-production/ printing/ plotting of various data, log sheets, protocols, measurements etc. These may be stored in CD (as per requirement) and handed over to BHEL as per requirement.
11.3	SITE ORGANISATION
11.3.1	The contractor shall maintain a site organisation of adequate strength in respect of manpower, T&P and other implements at all times for smooth execution of the contract. This organisation shall be reinforced from time to time, as required, to make up for slippage from the schedule without any commercial implication to BHEL. The site organisation shall be headed by a competent manager having sufficient authority to take decisions at site.
11.3.2	On award of contract, the contractor shall submit to BHEL a site organisation chart indicating the various levels of personnel to be deployed on the job. 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 deviations in this regard will not generally be permitted.
11.3.3	The site-in charge once approved and posted at site, should not be changed through-out the contract period as far as practicable.
11.3.4	Following (minimum) manpower is to be deployed at site by the successful vendor for their day to day supervision etc. This is over & above one experienced site-in-charge to be posted at site as per following requirement:
	<ul style="list-style-type: none"> a. 1 (one) person with material management experience within 15 days of LOI. b. 1 (one) person with insurance claim lodging & settlement experience within 60 days of LOI. c. 1 (one) person with experience in material handling/stacking/verification etc. within 30 days of LOI. d. 1 (one) person with experience in computerized material management system and record keeping and updation and reporting within 30 days of LOI
11.3.5	The above supervisory staff requirement is minimum. Supporting working level dealing staff for various area wise functioning like (FGD System along with auxiliaries & electrical system, equipments of control & instrumentation system, non-BHEL supply items, cement, steel etc) are to be exclusively deployed additionally for smooth execution of the job along with supporting staff for bidder's own store & purchase, material management of bidder's own material, planning, finance, administration etc. MM supporting staff will have to deal with transport agency, railway authorities, liason with customer regarding gate pass etc., identify and issue of materials, other

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	day to day co-ordination required to be carried out as per the instruction of BHEL Engineer (MM).
11.3.6	In the event of non deputation of supervisor (as per clause no. 11.3.4) by the bidder, BHEL shall reserve the right to deduct Rs 30,000.00 per man-month for the supervisor from the date of deputation as indicated above from RA bills. Further induction of manpower regarding site supervisor & working staff will be decided at site as per requirement.
11.3.7	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.
11.3.8	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.
11.3.9	The contractor shall also submit to BHEL for approval a list of T&P, tackle etc., prior to commencement of site activities. These tools & tackles shall not be removed from site without written permission of BHEL.
11.4	WORKING HOURS/ LEAVES Presently normal working at site is 6 days a week and 8 hours per day. However, in special cases work may continue round the clock, or may continue on Sundays/holidays for which availability of above manpower should be ensured if required by BHEL. However, no any payment will be made for working beyond normal hours in such special cases and contractor has to quote accordingly.
11.4.1	Contractor shall provide blank format books of RIV, SRV, gate pass, MDR, tag and other stores related formats as per requirement. If contractor fails to provide as above for a continuous period of 15 days or more, BHEL shall arrange the same and the cost with over head @ 30% will be deducted from contractor's R.A. bill or any other dues.
11.4.3	The contractor shall provide tarpaulin, plastic, weatherproof & fireproof covering materials for stacking & storing of materials as required. If contractor fails to provide as above for a continuous period of 15 days or more, BHEL shall arrange the same and the cost with over head @ 30% will be deducted from contractor's R.A. bill or any other dues.
11.4.4	The contractor shall provide wooden/ RCC sleepers as per BOQ for stacking & storing of materials as per instruction from BHEL site engineer. If contractor fails to provide as above for a continuous period of 15 days or more, BHEL shall arrange the same and the cost with over head as per GCC will be deducted from contractor's RA bill or any other dues.
12.0	LIQUIDATED DAMAGE
12.1	Since the bidder is dependent on the arrival of materials at site, the liquidated damage will be charged if the consignment is not unloaded in time and BHEL had to pay any detention/demurrage. The amount of LD will be limited to the amount of such charges + 30% in each case. The total ceiling for such liquidated damages shall be limited to 10 % of the executed contract value.
13.0	QUALITY CONTROL & QUALITY ASSURANCE
13.1	INSPECTION & FIELD QUALITY ASSURANCE
13.1.1	Contractor shall carry out all activities conforming to the approved Field Quality Plan (FQP) & technical instructions as revised from time to time. 'Total Quality' shall be the watchword of the work and contractor shall strive to achieve the quality standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and quality standards. Contractor shall provide the services of quality assurance engineer as per the relevant clauses.
13.1.2	Preparation of quality assurance log sheets and protocols with customer / consultants / statutory authority, welding logs, NDE records, testing & calibration records and other quality control and quality assurance documentation as per BHEL

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	engineer's instructions, is within the scope of work / specification. These records shall be submitted to BHEL / customer for approval from time to time.
13.1.3	The protocols between contractor and customer / BHEL shall be made for correctness of foundations, materials, procedures, at each stage of installation, generally as per the requirement of customer / BHEL. This is necessary to ensure elimination of errors and to avoid accumulation and multiplication of errors.
13.1.4	A daily log book (with proper indexing) should be maintained by every supervisor / engineer of contractor, for respective area of work, on the job for detailing and incorporating alignment/ clearance / centering / levelling readings and inspection details of various equipment, etc. This log book shall be always accessible to BHEL engineers. High pressure welding (as applicable under the scope of this contract) details like serial number of weld joints, welders name, date of welding, details of repair, heat treatment etc. will be documented in welding log as per BHEL Engineer's instructions. Record of radiography (as applicable under the scope of this contract) containing details like serial number of weld joints, date of radiography, repairs, if any, re-shots etc shall also be maintained as per BHEL Engineer's instructions. Record of heat treatments (as applicable under the scope of this contract) performed shall be maintained as prescribed by BHEL.
13.1.5	The performance of welders (as applicable under the scope of this contract) will be reviewed from time to time as per the BHEL standards. Welders' performance record shall be furnished periodically for scrutiny of BHEL's Engineer. Corrective action as informed by BHEL shall be taken in respect of those welders not conforming to these standards. This may include removal/ discontinuance of concerned welder(s). Contractor shall arrange for the alternate welders immediately.
13.1.6	Only welders duly authorized by BHEL / customer / consultant after welder qualification test as per ASME Sec-Ix / AWS D1.1 (as applicable) shall be engaged on the work. All the welders shall carry identity cards as per the proforma prescribed by BHEL / Customer / Consultant.
13.1.7	Any re-laying or re-termination of cables / re-erection of instruments / recalibration of instruments etc. required due to contractor's mistake and found at any stage inspection, shall be carried out by the contractor at no extra cost. Repair / rectification procedure to be adopted to make any job acceptable shall be subject to the approval of BHEL.
13.1.8	Weekly Quality Review Meeting at site shall be organised by BHEL to discuss quality issues and next weeks inspection plans. Site in-charge of the contractor along with QAEs of the contractor must be present in the meeting with closure report of the issues raised by BHEL in the previous meetings.
14.2	REQUIREMENT OF ISO 9001
14.2.1	BHEL: PSER is accredited with ISO 9001 certification and as such this work is subject to various audits to meet ISO 9001 requirements.
14.2.2	The basic philosophy of the Quality Management System under ISO 9001 is to define the organizational responsibility, work as per documented procedures, verify the output with respect to acceptance norms, identify the non-conforming product / procedure and take corrective action for removal of non-conformance specifying the steps for avoiding recurrence of such non-conformities, & maintain the relevant quality records. The non-conformities are to be identified through the conduct of periodical audit of implementation of quality systems at various locations/stages of work. Suppliers / vendors of various products / services contributing in the work are also considered as part of the quality management system. As such the contractor is expected not only to conform to the quality management system of BHEL but also it is desirable that they themselves are accredited under any quality management system standard.
14.2.3	BHEL reserves the right to carry out quarterly quality audits and quality surveillance of the systems and procedures of contractor's quality management. Contractor shall

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	provide all necessary assistance to enable BHEL to carry out such audit & surveillance.
14.2.4	Quality audits / approval of the results of test & inspection will not prejudice the right of BHEL to reject an equipment service not giving desired performance and shall not in no way limit the liabilities and responsibilities of the contractor in earning satisfactory performances of equipment / service as per specification.
15.3	MMEs / MMRs
15.3.1	Contractor shall ensure deployment of reliable and calibrated MMEs (Measuring and Monitoring Equipment). The MMEs shall have test / calibration certificates from authorised / Government approved / Accredited agencies traceable to National / International Standards. Re-testing / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the contract price. The contractor will also have alternate arrangements for such MMEs so that work does not suffer when the particular equipment / instrument is sent for calibration. Also if any MMEs not found fit for use, BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall i.e. repeat the readings taken by that instrument, failing which BHEL may deploy MME and retake the readings at Contractor's cost.
15.3.2	Contractor shall provide all the Measuring Monitoring Equipment (MMEs) required for completion of the work satisfactorily. These MMEs shall be of brand, quality and accuracy specified by BHEL Engineer and should have necessary calibration and other certificates as per the requirement of BHEL Engineer. Decision of BHEL Engineer regarding acceptance or otherwise of the measuring instruments / gauges / tools for the work under this specification, is final and binding on the contractor. BHEL shall give an indicative list of MMEs required for this work else where in this contract and to be made available by the contractor. The list will be reviewed by BHEL site as per the requirement of approved FQPs and the contractor shall meet any augmentation needed wherever required.
15.3.3	It is the responsibility of the contractor to prove the accuracy of the testing / measuring / calibrating equipment brought by him based on the periodicity of calibration as called for in the BHEL's quality assurance standards/BHEL Engineer's instructions.
15.3.4	Re-work necessitated on account of use of invalid MMEs shall be entirely to the contractor's account. He shall be responsible to take all corrective actions, including resource augmentation if any, as specified by BHEL to make-up for the loss of time.
15.3.5	In the courses of erection, it may become necessary to carry repeated checks of the work with instruments recently calibrated, re-calibrated. BHEL may counter / finally check the measurements with their own MMEs. Contractor shall render all assistance in conduct of such counter / final measurements.
15.4	INSPECTION BY TS / FES / QA ENGINEERS OF BHEL UNITS / ENGINEERING CENTRES
15.4.1	Apart from day-to-day inspection by BHEL Engineers stationed at Site and Customer's Engineers, stage inspection of equipment under erection and commissioning at various stages may also be conducted by teams of Engineers from Field Engineering Services of BHEL's Manufacturing Units, Quality Assurance teams from Field Quality Assurance, Unit/Factory Quality Assurance and Commissioning Engineers from Technical Services etc. Contractor shall arrange all labour, tools and tackles etc along with proper access for such stage inspections free of cost.
15.4.2	Any modifications suggested by BHEL FES and QA Engineers' team shall be carried out. Claims of contractor, if any, shall be dealt as per applicable clause of the contract, and provided such modifications have not arisen for reasons attributable to the contractor.
15.5	CONFORMANCE TO THE STATUTORY REQUIREMENTS (AS APPLICABLE UNDER THE SCOPE OF THE CONTRACT)
15.5.1	The work to be executed under these specifications has to be offered for inspection, at appropriate stages of work completion, to various statutory authorities for

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	<p>compliance with applicable regulations. The work related statutory inspections, though not limited to, are as under:</p> <p>1) Inspectorate of Steam Boilers and Smoke Nuisance 2) Electrical Inspector 3) Factory Inspector, Labour Commissioner, PF Commissioner and other authorities connected to this project work.</p> <p>The scope includes getting the approvals from the statutory authorities, which includes arranging for inspection visits of statutory authority periodically as per BHEL Engineer's instructions, arranging materials for ground inspection, taking rub outs for stamping of the pressure parts / pipes to be offered for inspection, submitting co-related inspection reports, documents, radiographs etc and following up the matter with them. Contractor shall also make all arrangements for offering the Products / Systems for inspection at location, as applicable, to the concerned authority.</p>			
15.5.2	Contractor should be qualified to execute pressure parts & piping work coming under the purview of IBR or Competent Inspecting Authority, for which he should register himself with CIB of state concerned / Competent Inspector. Contractor also should be aware of the latest Boiler regulations and Electricity Act, including the amendments thereof, as applicable under the scope of this contract.			
15.5.3	Contractor shall comply with 'Qualification Tests for welders engaged in welding of Boilers and Steam Pipes under Construction, Erection and Fabrication at Site in India and in repairing Boilers and steam pipes by welding' in line with Chapter XIII of Indian Boiler Regulations-1950, for testing his welders / men / workers, including all associated fees, procedures, required instruments and equipment and their calibration there of. It shall be contractor's responsibility to obtain approval of Statutory Authorities, wherever applicable, for the conducting of any work which comes under the purview of these authorities, at his cost.			
15.5.4	The following fees shall be excluded from scope of Contractor: 1. Registration Fee as per Regulation 385 of Chapter IX of Indian Boiler Regulations-1950 or Registration Fee as per prevailing statutory boiler regulations. 2. Fees for inspection of Boiler at the site of Construction as per Regulation 395 A, sl no 4 of Chapter IX of Indian Boiler Regulations- 1950. However all other fees like visit fees charged by the Boiler Inspector and other arrangements for his visit or visits till satisfactory completion of work, shall be included in scope of Contractor.			
15.6	STORAGE & PRESERVATION OF WELDING ELECTRODES & OTHER BHEL-ISSUED MATERIAL			
15.6.1	The contractor shall be responsible for storage & preservation of welding electrodes & other BHEL-issued materials as per BHEL Storage & Preservation Guidelines / Instructions.			
15.7	PENALTIES ON VENDORS / SUB-CONTRACTORS AGAINST NON-COMPLIANCE OF QUALITY NORMS			
Sl. No.	Nature of Non-compliance	Penalty for Domestic Project	Penalty for Export Project	Remarks
GENERAL				
15.7.1	Unavailability of QAE deployment schedule (duly approved by BHEL Site) matching with manpower requirement of approved L2 schedule	0.10%	0.10%	Against each RA bill
15.7.2	Unavailability of required number of QAE with proper experience & NDT certification as per the requirement of the Contract	Rs. 1,000.00	\$16.00	Per person per day
15.7.3	Not attending quality meeting of BHEL by nominated member of vendor / sub-contractor	Rs. 2,000.00	\$32.00	Per meeting

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CALIBRATION				
15.7.4	Use of MMEs without valid calibration certificate	Rs. 1,000.00	\$16.00	Per equipment per instance
15.7.5	Use of NDT equipment, welding equipment without having valid calibration certificate / condition not as per requirement	Rs. 1,000.00	\$16.00	Per equipment per instance
WELDING & NDT				
15.7.6	Unqualified welders carrying out welding / tack welding	Rs. 1,000.00	\$16.00	Per welder per instance. (Gatepass of the person shall be withheld)
15.7.7	Not using portable oven for welding consumables	Rs. 500.00	\$8.00	Per welder per instance. (The consumables in the oven shall be confiscated)
15.7.8	Not using electrodes pre-baked in baking oven	Rs. 500.00	\$8.00	Per instance. (The subject consumables shall be confiscated)
15.7.9	Not using welding consumables of approved make & not using correct type of electrode as per approved EWS / Drawing / WPS	Rs. 1,000.00	\$16.00	Per instance. (The subject consumables shall be confiscated)
15.7.10	Non-removal of welding slag and spatters after welding	Rs. 500.00	\$8.00	Per joint
15.7.11	Not using NDT equipment as prescribed in the manual / FQP / guidelines / Contract	Rs. 1,000.00	\$16.00	Per equipment per instance
15.7.12	Welder doing welding without valid job card	Rs. 500.00	\$8.00	Per instance
15.7.13	Discrepancy observed in the weld joints identified by BHEL / Customer for RT vs RT film offered	Rs. 2,000.00	\$32.00	per joint
MATERIAL MANAGEMENT				
15.7.14	Non-maintenance of grid pillar marking	Rs. 200.00	\$3.00	Per location week
15.7.15	Mismatch of location of material in store area w.r.t. location mentioned in stock register	Rs. 500.00	\$8.00	Per instance
15.7.16	Non-compliance of Preservation of material as per storage & preservation manuals	Rs. 1,000.00	\$16.00	Per equipment
15.7.17	Not offering received material for verification within stipulated time as per contract	Rs. 500.00	\$8.00	Per instance
PAINTING & ALLIED WORKS				
15.7.18	Not using primer / paints of approved make and as per Specifications	Rs. 1,000.00	\$16.00	Per instance
15.7.19	Painting without proper surface preparation as per approved schedule / drawing / FQP	Rs. 500.00	\$8.00	Per instance

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PROTOCOLS & LOG SHEETS				
15.7.20	Delay in preparation of Protocols / Logsheets as per approved FQP within 3 days of completion of checks	Rs. 200.00	\$3.00	Per protocol per day delay
INSPECTION OF BOUGHT-OUT ITEMS / CONSUMABLES				
15.7.21	Delay in offering inspection of Bought-out Items / Consumables / Aggregates (for items which need site inspection as per approved QP) within 3 days of receipt of material at site	1% of the item value of the LOT	1% of the item value of the LOT	per item per day delay after receipt of material
15.7.22	Delay in submission of required documents (viz. Invoice, Inspection Release Note, COC, MDCC, MTC as the case may be) of Bought-out Items (shop inspection items / consumables) with in 3 days of receipt of material at site.	1% of the item value of the LOT	1% of the item value of the LOT	per item per day delay after receipt of material
NOTE: Any non-conformity requiring dismantling / rework, attributable to vendor / sub-contractor, shall be penalised at a rate mentioned above or cost to BHEL, which ever is higher.				
16.0	OCCUPATIONAL HEALTH, SAFETY & ENVIRONMENT MANAGEMENT			
16.1	General			
16.1.1	The contractor shall comply with all the requirements of "The Building and Other Construction Workers (Regulation of Employment & Conditions of Service) Act," 1996 and its Central Rule 1998 / State Rules and any other statutory requirements as applicable.			
16.1.2	The Contractor shall follow NTPC Safety Rules as issued from time to time with respect to safety in construction & erection.			
16.1.3	The contractor shall have the approved Safety, Health and Environment (SHE) Policy in respect of Safety and health of Building Workers and it shall be circulated widely and displayed at conspicuous place in Hindi and local language understood by the majority of the workers. A copy of the safety policy should be submitted to Engineer in charge.			
16.1.4	The contractor shall submit the safety plan comprising of methods to implement the Safety Policy/ Rules, Risk assessment and ensuring Safety at work areas, Safety audits, inspections and its compliance, Supervision and Responsibility to ensure Safety at various levels, Safety training to employees, review of Safety and accident analysis, ensure Health and Safety Procedures to prevent accidents to Engineer I/c for approval as per the format of Safety plan as annexed at Annexure - I.			
16.1.5	The Contractors shall ensure proper safety of all the workmen, materials, plant and equipment belonging to him or to the Employer or to others, working at the Site.			
16.1.6	All equipments used in construction and erection by the contractor shall meet BIS I International Standards and where such standards do not exist, the Contractor shall ensure these to be absolutely safe. All equipments shall be strictly operated and maintained by the contractor in accordance with manufacturer's operation manual. The contractor should also follow Guidelines/Rules of the Employer in this regard.			
16.1.7	The Contractors shall provide suitable latest Personal Protective Equipments of prescribed standard to all their employees and workmen according to the need. The Engineer I/c shall have the right to examine these safety equipments to determine their suitability, reliability, acceptability and adaptability. The contractor should also ensure these before their use at worksite.			
16.1.8	The Contractor shall provide safe working conditions to all workmen and employees at his workplace including safe means of access, railings, stairs, and ladders, scaffolding, work platforms, toe boards etc. The scaffoldings shall be erected under the control and supervision of an experienced and competent person. For erection of scaffolds, access, work platforms etc. shall be good and the contractor shall use standard quality of			

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	material.
16.1.9	The Contractor shall follow and comply with all the Safety Rules, standards, code of practices of NTPC and relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without any protest or contest or reservation. In case of any unconformity between statutory requirement and the Safety Rules of the Employer referred above, the latter shall be binding on the Contractor unless the statutory provisions are more stringent. As and when required he can refer / obtain copy of NTPC safety documents as stated above.
16.1.10	The contractor shall have his own arrangements with nearby hospitals for shifting and treatment of sick and injured. The medical examination of the workers employed in hazardous areas shall be conducted as per Rule 223 Of The Building and Other Construction Worker (Regulation of Employment and Condition of Service) Central Rule 1998 Their health records shall be maintained accordingly and to be submitted to Engineer 1/c when asked for. If any worker found suffering from occupational health hazard, the worker should be shifted to suitable place of working and properly treated under intimation to Engineer 1/c. The medical fitness certificate to be submitted to Engineer (1/c).
16.1.11	First Aid boxes equipped with requisite articles as specified in the Rule 231 of The Building and Other Construction Worker (Regulation of Employment and Condition of Service) Central Rule 1998 shall be provided at construction sites for the use of workers. Training has to be provided on first aid to workmen & office bearers working at site.
16.2	Emergency Action Plan The contractor shall prepare an emergency action plan approved by his competent authority to handle any emergency occurred during construction work. Regular mock drills shall be organized to practice this emergency plan. The Emergency Action Plan should be widely circulated to all the employees and suitable infrastructure shall be provided to handle the emergencies.
16.3	Scaffolding The contractor shall take all precautions to prevent any accidental collapse of scaffolding or fall of persons from scaffolding. The contractor should ensure that scaffolding are designed by a competent person and its erection and repairs should be done under the expert supervision. The scaffolding shall meet the required strength and other requirements for the purpose for which the scaffold is erected. The material used for scaffold should conform to the BIS / International standards.
16.4	Opening The contractor shall ensure that there is no opening in any working platform/any floor of the building, which may cause fall of workers or material. Whenever an opening on a platform/any floor of the building is unavoidable, the opening should be suitably fenced and necessary measures for protection against falling objects or building workers from such platform are taken by providing suitable safety nets, safety belts or other similar means.
16.5	Explosives The contractor shall take all precautions while handling, using, storing or transporting of all explosives. Before usage of any explosive necessary warning / danger signals be erected at conspicuous places to warn the workers and general public. The contractor should strictly ensure that all measures and precautions required to be complied for use, handling, storing or transportation of explosives under the rules framed under the Explosives Act, 1884.
16.6	Fencing of Machinery The contractor shall provide suitable fencing or guard to all dangerous and moving parts of machinery The contractor shall not allow any of the employees to clean, lubricate, repair, adjust or examine during machinery in motion, which may cause injury to the person.
16.7	Carrying of Excessive Weight by a Worker

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	<p>The worker shall not be allowed to lift by hand or carry over his head, back or shoulder more than the maximum limit set by the prescribed rules for the construction Workers.</p>
16.8	<p>Dangerous and Harmful Gases / Equipment</p> <p>The contractor shall ensure that the workers are not exposed to any harmful gases during any construction activity including excavation, tunneling, confined spaces etc. The contractor should not allow any worker to go into the confined space unless it is certified by Engineer (I/c) to be safe and fit for the entry to such work place. Proper record and work permits should be followed to carry out such works.</p>
16.9	<p>Dangerous and Harmful Gases / Equipment</p> <p>The contractor shall ensure that the workers are not exposed to any harmful gases during any construction activity including excavation, tunneling, confined spaces etc. The contractor should not allow any worker to go into the confined space unless it is certified by Engineer (I/c) to be safe and fit for the entry to such work place. Proper record and work permits should be followed to carry out such works.</p>
16.10	<p>Overhead Protection</p> <p>The contractor shall ensure that any area exposed to risk of falling materials, articles or objects is roped off or cordoned off or otherwise suitably guarded from inadvertent entry of any person.</p> <p>Wherever there is a possibility of falling of any material, equipment or construction workers while working at heights, a suitable and adequate safety net should be provided. The safety net should be in accordance with BIS Standards.</p>
16.11	<p>Working at Heights</p> <p>All working platforms, ways and other places of construction work shall be free from accumulations of debris or any other material causing obstructions and tripping. Wherever workers are exposed to the hazard of falling into water, the contractor shall provide adequate equipment for saving the employees from drowning and rescuing from such hazards. The contractor shall provide boat or launch equipped with sufficient number of life buoys, life jackets etc. manned with trained personnel at the site of such work.</p> <p>Every opening at elevation from ground level through which a building worker, vehicle, material equipment etc. may fall at a construction work shall be covered and/or guarded suitably by the contractor to prevent such falls.</p> <p>Wherever the workers are exposed to the hazards of falling from height, the contractor shall provide full harness safety belts fitted with fall arresting systems to all the employees working at higher elevations and life line of 8 mm diameter wire rope with turn buckles for anchoring the safety belts while working or moving at higher elevations. Safety nets shall also be provided for saving them from fall from heights and such equipment should be in accordance with BIS standards.</p> <p>Wherever there is a possibility of falling of any material, equipment or construction workers while working at heights, a suitable and adequate safety net should be provided. The safety net should be in accordance with BIS Standards.</p> <p>The contractor shall provide standard prefabricated ladders on the columns where the workers are required to use them as an access for higher elevations till permanent staircase is provided. The workers shall be provided with safety belts permanent staircase is provided. The workers shall be provided with safety belts fitted with suitable fall arresting system (Fall arrestors) for climbing/getting down through ladders to prevent fall from height.</p>
16.12	<p>Handling of Hazardous Chemicals</p> <p>The Contractor will notify well in advance to the Engineer I/c of his intention to bring to the Site any container filled with liquid or gaseous fuel or explosive or petroleum substance or such chemicals which may involve hazards. NTPC shall have the right to prescribe the conditions, under which such container is to be stored, handled and used during the performance of the works and the Contract shall strictly adhere to and comply with such instructions. The Engineer I/c shall have the right at his sole discretion to inspect any such container or such construction plant / equipment for which material in the container is required to be used and if in his opinion, its use is not safe, he may forbid its use. No claim due to such prohibition shall be entertained by</p>

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	<p>NTPC and NTPC shall not entertain any claim of the Contractor towards additional safety provisions / conditions to be provided for / constructed.</p> <p>Further, any such decision of the Engineer I/c shall not, in any way, absolve the Contractor of his responsibilities and in case, use of such a container or entry thereof into the Site area is forbidden by NTPC, the Contractor shall use alternative methods with the approval of the NTPC without any cost implication to the NTPC or extension of work schedule.</p> <p>Where it is necessary to provide and / or store petroleum products or petroleum mixtures and explosives, the Contractor shall be responsible for carrying-out such provision and / or storage in accordance with the rules and regulations laid down in Petroleum Act 1934, Explosives Act 1948, and Petroleum and Carbide of Calcium Manual published by the Chief Inspector of Explosives of India. All such storage shall have prior approval of the Engineer I/c. In case any approvals are necessary from the Chief Inspector (Explosives) or any statutory authorities, the Contractor shall be responsible for obtaining the same.</p> <p>The Contractor shall be fully responsible for the safe storage of his and his Sub-contractor's radio-active sources in accordance with BARC/DAE (Bhabha Atomic Research Centre/ Department of Atomic Energy, Govt. of India) Rules and other applicable provisions. All precautionary measures stipulated by BARC/DAE in connection with use, the contractor would take storage and handling of such material.</p> <p>The contractor shall provide suitable personal protective equipments to the workers who are handling the hazardous and corrosive substances including alkalis and acids.</p> <p>As a precautionary measure the contractor should keep the bottles filled with distilled water in cupboard / Boxes near work place for emergency eye wash by worker exposed to such hazardous chemicals.</p>
16.13	<p>Eye Protection</p> <p>The contractor shall provide suitable personal protective equipment to his workmen depending upon the nature of hazards and ensure their usage by the workers engaged in operations like welding, cutting, chipping, grinding or similar operations which may cause injuries to his eyes.</p>
16.14	<p>Excavation</p> <p>The contractor shall take all necessary measures during excavation to prevent the hazards of falling or sliding material or article from any bank or side of such excavation which is more than one and a half meter above his footing by providing adequate piling, shoring, bracing etc. against such bank or sides.</p> <p>Adequate and suitable warning signs shall be put up at conspicuous places at the excavation work to prevent any persons or vehicles falling into the excavation trench. No worker should be allowed to work where he may be stuck or endangered by excavation machinery or collapse of excavations or trenches.</p>
16.15	<p>Electrical Hazards</p> <p>The contractor should ensure that all electrical installations at the construction work comply with the requirements of latest electricity acts / rules.</p> <p>The contractor shall take all adequate measures to prevent any worker from coming into physical contact with any electrical equipment or apparatus, machines or live electrical circuits which may cause electrical hazards during the construction work. The contractor shall provide the sufficient ELCBs / RCCBs for all the portable equipments, electrical switchboards, distribution panels etc. to prevent electrical shocks.</p> <p>The contractor should ensure use of single I double insulated hand tools or low voltage i.e., 110 volts hand tools.</p> <p>The contractor should also ensure that all temporary electrical installations at the construction works are provided with earth leakage circuit breakers.</p>
16.16	<p>Vehicular Traffic</p>

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	The contractor should employ vehicle drivers who hold a valid driving license under the Motor Vehicles Act, 1988.
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16.17	<p>Lifting Appliances, Tools & Tackles, Lifting Gear And Pressure Plant & Equipment etc.</p> <p>The contractor shall ensure all the lifting appliances, tools & tackles including cranes etc., lifting gear including fixed or movable and any plant or gear, hoists, Pressure Plant and equipment etc. are in good condition and shall be examined by competent person and only certified shall be used at sites. Periodical Examination and the tests for all lifting / hoisting equipment & tackles shall be carried out. A register of such examinations and tests shall be properly maintained by the Contractor and will be promptly produced as and when desired by the Engineer I/c or by the person authorized by him.</p>
16.18	<p>Excessive Noise, Vibration</p> <p>The contractor shall take adequate measures to protect the workers against the harmful effect of excessive noise or vibration. The noise should not exceed the limits prescribed under the concerned rules, Noise Pollution (Regulation and Control) Rules, 2000.</p>
16.19	<p>Electrical Installations</p> <p>The Contractor shall not interfere or disturb electric fuses, wiring and other electrical equipment belonging to the Employer or other contractors under any circumstances, whatsoever, unless expressly permitted in writing by the Engineer I/c to handle such fuses, wiring or electrical equipment.</p> <p>Before the Contractor connects any electrical appliances to any plug or socket belonging to the other contractor or the NTPC, he shall</p> <ol style="list-style-type: none"> i) Satisfy the Engineer I/C that the appliance is in good working condition; ii) Inform the Engineer I/C of the maximum current rating, voltage and phases of the appliances; iii) Obtain permission of the Engineer I/C detailing the sockets to which the appliances may be connected. <p>The Engineer I/C will not grant permission to connect until he is satisfied that:</p> <p>The appliance is in good condition and is fitted with suitable plug; having earth connection with the body.</p> <p>Wherever armored / metallic sheathed multi core cable is used, the same armored / sheathed should be connected to earth.</p> <ol style="list-style-type: none"> iv) No repair work shall be carried out on any live equipment. The Engineer I/c must declare the equipment safe and a permit to work shall be issued by the NTPC / contractor as the case may be to carry out any repair / maintenance work. While working on electric lines / equipments whether live or dead, suitable type and sufficient quantity of tools will have to be provided by the contractor to electricians / workmen / Officers. v) The contractor shall employ necessary number of qualified, full time Electricians / Electrical Supervisors to maintain his temporary electrical installation. <p>The installations are provided with suitable ELCBs and RCCBs wherever required</p>
16.20	Safety Organisation
16.20.1	<p>The contractor employing more than 250 workmen whether temporary, casual, probationary, regular or permanent shall employ at least one full time safety officer exclusively to supervise safety aspects of the equipments and workmen, who will coordinate with the NTPC Safety Officer. Further requirement of safety officers, if any, shall be guided by Rule 209 of The Building and Other Construction Worker (Regulation of Employment and Conditions of Service) Central Rule 1998. In case the</p>

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	<p>work is being carried out through subcontractor, the employees / workmen of the sub contractor shall also be considered as the contractor's employees/workmen for the above purpose.</p> <p>In case of contractor deploying less than 250 workmen he should designate one of his Engr / supervisor or the contractor himself (if he is directly supervising the work) as safety officer in addition to his existing responsibilities. The Engr./ supervisor should get atleast 2days safety training from any reputed organization or from NTPC before resuming the work. If already trained in past the declaration along with trg. certificate to be furnished to NTPC safety officer.</p>
16.20.2	The name and address of such Safety Officer of the Contractor will be promptly informed in writing to the EIC with a copy to the Project Safety Officer before he starts work or immediately after any change of the incumbent is made during currency of the Contract.
16.21	<p>Reporting of Accident and Investigation</p> <p>In case any accident occurs during the construction / erection or other associated activities undertaken by the Contractor thereby causing any near miss, minor or major or fatal injury to his employees due to any reason, whatsoever, it shall be the responsibility of the Contractor to promptly inform the same to the Engineer I/C, NTPC Safety Officer with a copy to NTPC Head of Project in the prescribed form and also to all the authorities envisaged under the applicable laws.</p>
16.22	Right to stop Work
16.22.1	The Engineer VC shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and / or property, and / or equipments. In such cases, the contractor shall be informed in writing about the nature of hazards and possible injury / accident and he shall comply to remove shortcomings promptly. The Contractor after stopping the specific work can, if felt necessary appeal against the order of stoppage of work to the Project Manager within 3 days of such stoppage of work and decision of the Project Manager in this respect shall be conclusive and binding on the Contractor.
16.22.2	The Contractor shall not be entitled for any damages / compensation for stoppage of work, {Sub-Clause XVIII (I)} due to safety reasons and the period of such stoppage of work shall not be taken as an extension of time for Completion of the Facilities and will not be the ground for waiver of levy of liquidated damages.
16.23	<p>Fire Protection</p> <p>The contractor shall provide sufficient fire extinguishers at place /s of work. The fire extinguishers shall be properly maintained as per relevant BIS Standards. The employees shall be trained to operate the fire extinguishers / equipment.</p>
16.24	Penalties
	<p>I. If the Contractor fails in providing safe working environment as per the Safety Rules of NTPC or continues the work even after being instructed to stop the work by the Engineer I/C as provided in Clause XVIII (1) above, the Contractor shall be penalized at the rate of Rs. 25,000/- per day or part thereof till the instructions are complied with and so certified by the Engineer I/C. However, in case of accident, the provisions contained in Sub-Clause XX (II) below shall also apply in addition to the penalties mentioned in this sub-clause.</p> <p>II. If the Contractor does not take all safety precautions and / or fails to comply with the Safety Rules as prescribed by the Employer or under the applicable law for the safety of the plant and equipment and for the safety of personnel and the contractor does not prevent hazardous conditions which cause injury to this own employees or employees of other contractors, or NTPC's employees or any other person who are at the Site or adjacent thereto, the Contractor shall be responsible for payment of penalty to NTPC as per the following schedule:-</p> <p>a) Fatal injury or accident causing death:</p> <p>Penalty @10% of contract value or Rs. 5,00,000/- per person, which ever is less.</p>

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	<p>b) Majorinjuries or accident causing 25% or more permanent disablement to workmen or employees:</p> <p>Penalty @2.5% of contract value or Rs. 1,00,000/- per person which ever is less</p> <p>Permanent disablement shall have the same meaning as indicated in The Workmen's Compensation Act' 1923. The penalty mentioned above shall be in addition to the compensation payable to the workmen / employees under the relevant provisions of the Workmen's Compensation Act' 1923 and rules framed there under or any other applicable laws as applicable from time to time.</p> <p>III. If any contractor worker found working without using the safety equipment like safety helmet, safety shoes, safety belts, etc. or without anchoring the safety belts while working at height the Engineer 1/c / Safety Officer of NTPC shall have the right to penalize the contractor for Rs. 200/- per person per day and such worker shall be sent out of the workplace immediately and shall not be allowed to work on that day. Engineer 1/c / Safety Officer of NTPC will also issue a notice in this regard to the contractor.</p> <p>IV. If two or more fatal accidents occur at same NTPC site under the control of contractor during the period of contract and he has</p> <ol style="list-style-type: none"> (1) not complied with keeping adequate PPEs in stock or (2) defaulted in providing PPEs to his workmen (3) not followed statutory requirements / NTPC safety rules (4) been issued warning notice/s by NTPC head of the project on non observance of safety norms (5) not provided safety training to all his workmen, the contractor can be debarred from getting tender documents in NTPC for two years from the date of last accident. <p>The safety performance will also be one of the overriding criteria for evaluation of overall performance of the contractors by NTPC. The contractor shall submit the accident data including fatal / non-fatal accidents for the last 3 years where he has undertaken the construction activities Projects-wise along with the tender documents. This will also be considered for evolution of tender documents. If the information given by the contractor found incorrect, his contract will be liable to be terminated.</p>
16.25	The Contractor will make available minimum quantity of all safety equipments and safety personal protection equipments (PPEs) of required specifications as per suggestive list included bidding documents as a part of "List of minimum T & P". Further Contractor will ensure availability of additional requirement for individual worker and safety equipment as per site requirement during execution of the contract till its completion.
16.26	<p>Award</p> <p>If the Contractor's performance on safety front is found satisfactory i.e. without any fatal/reportable accident in the year of consideration; he may be considered for suitable award "ACCIDENT FREE SAFETY MERITORIOUS AWARD" as per scheme of the employer.</p>
16.27	<p>The Contractor shall abide by the following during Construction and Erection activities</p> <ol style="list-style-type: none"> I. Chain pulley block shall not be used for loads more than 2 (Two) tonne. II. Hydra shall not be used for material transport. III. Cage shall necessarily be provided to Monkey ladders of height more than 4 m. IV. Fencing shall be provided to all Electrical Distribution boards and

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	transformers etc.
16.28	Further details of applicable HSE norms shall be as per HSE clause of Tender SCC.
17.0	SPECIAL CONDITIONS FOR UNLOADING AND TRANSPORTATION /STORAGE WORKS
17.1	It would be the responsibility of the contractor to keep in constant contact with the BHEL authorities at site to find out the arrival of the consignments. The lorry waybill/ truck waybill for consignments would be handed over to the contractor immediately on receipt.
17.2	The contractor is also required to find out from concerned authorities, regarding arrival of consignment prior to the receipt of consignment note, if any, and take delivery of the same on 'Indemnity Bond'. Indemnity Bonds would be executed by BHEL, when intimation regarding arrival of consignments is furnished by contractor.
17.3	Payment of all demurrages/ wharfages that result due to contractor's fault/ delay would be the responsibility of the contractor and to their account. If BHEL have to make payment of demurrage/ wharfages together with the freight the amounts so paid as demurrages/ wharfages for the reasons stated above shall be recovered from the bills of the contractor.
17.4	It would be the responsibility of contractor to examine the packages, consignments etc., on arrival and bring to the notice of transport authorities and BHEL authorities regarding loss/ damages, if any observed in the consignments proposed to be taken delivery of, before taking delivery, particularly of consignment in 'smalls' the weight of the packages and any discrepancies shall be reported immediately to BHEL/ transport authorities. In case, it becomes necessary to take open delivery from the authorities contractor should make all arrangements from taking open deliveries. All expenses connected there with shall be to the account of the contractor. Any loss that occurs to BHEL on account of this and recovery affected from his RA bills.
17.5	Any discrepancy/ shortage/ damage found in the consignment after taking delivery from the carriers after giving clear receipt would be the responsibility of the contractor and the amount liable to be lost by BHEL on such accounts is recoverable from the contractor.
17.6	In case of apparent damages/ shortage to consignment/ packing noticed by the contractor such cases shall be brought to the notice of BHEL and cleared only with their knowledge/ approval.
17.7	Consignments coming on Sundays and holidays are also required to be handled by the contractor. Since the offices and go-downs will probably remain closed on these days, it will be the responsibility of the contractor to contact the site engineer/ his authorized representative at BHEL at their residence and obtain instructions.
17.8	BHEL reserves the right to recover from the contractor any loss which arises out of undue delay/ discrepancy shortage / damage or any other causes during transit or during unloading or during stacking, or any time in the custody of the contractor.
17.9	Unloading from transport equipments, transportation, unloading at storage area/ work site of heavy sophisticated equipment like heavy motors, mills, drums, heavy bearings, fans, transformers, electrical panels, turbine, generator etc shall be done in the presence of and as per the direction of BHEL representative including stacking and restacking if necessary arises.
17.10	Since the consignment 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. Contractor's quoted rate shall include all such contingencies.
17.11	Unloading of material/ components at storage yard, using contractor's own cranes, lorries, trailers and other equipments with valid road permits for their operation, unloading and stacking at storage yard for verification shall be the responsibility of the contractor under this contract.
17.12	All the materials shall be stored 6" (six inches) above the ground level by the use of wooden/ concrete sleepers or wooden logs. No material shall be allowed to remain on ground at any time. Materials shall never be stacked in low-lying areas. Where it

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	is likely to get flooded during rain.
17.13	Stacking of the materials shall be done as per the instructions and to the satisfaction of BHEL engineers. The materials shall be stacked that it should facilitate easy handling during erection. In case any negligence or improper stacking is noticed, it shall be the responsibility of the contractor to re-stack at his cost. Failure to do so may force BHEL to get the job done through other agencies and recover the same from the contractor.
17.14	Under the scope of this contract, it shall be the responsibility of the contractor to provide facilities to open the package in the presence of BHEL Engineers verifying the same, repacking wherever and whenever necessary properly stacking them as may be directed by BHEL so as to facilitate proper handling and verification.
17.15	The necessary lifting tackles, tools, wire rope slings of suitable capacities and other equipment incidental to carry out this work shall have to be arranged by the contractor himself. All such lifting tackles and equipments shall be approved by BHEL before they are actually used for works.
17.16	The contractor shall execute the work in the most substantial and workmen like manner. The stores shall be handled with care and diligence. Any loss to BHEL due to contractor's lapse shall have to be made by the contractor.
17.17	If the contractor or his workmen or employees shall break, deface, injure or destroy any part of a building, road, kerfs, enclosures, water pipes, fence, cables, drains, electric or telephone posts or wires, trees or any other property for to any part of erected boilers, TG sets components etc, contractor shall make good the same at his own expense or in default, the site engineer may cause the same to be made good by other workmen or by other means and deduct the expenses (of which site engineer's decision is final) from any sums that may be then or at any time there after becomes due to contractor or from his security deposit or any other money due.
17.18	When the consignments are received from road transport agencies, it is the responsibility of the contractor to collect the road permit for the said consignment and deposit the same to the concerned BHEL authority. The contractor has to keep a log for accounting of the road permits.
17.19	The contractor in coordination with BHEL staff shall prepare grid plans for storage of various types of material in open storage yard/ covered stores. Grid plan shall be product group (PG) wise/ product wise/unitwise/ section wise cable storage system, equipment/ supplier wise bought out package system etc and should be stacked & stored in such a way so that they are approachable & easily sequentially retrievable to facilitate issue to erection agencies.
17.20	The contractor shall unload and store at the designated location as advised by BHEL/ customer site authorities. The contractor must keep computerised storage record along with its coordinate/ location of storage in the overall grid plan and shall update regularly in accordance with unloading/stacking of fresh material and issue of material to erection agencies.
17.21	Locating and facilitating Issue of material to various erection agencies is in the scope of contractor. The contractor shall have prior approval of BHEL before issue of materials to any erection agency and shall maintain proper computerised record of issue of material.
17.22	The contractor shall render necessary assistance to BHEL in lodging insurance claims.
18.0	UPKEEPMENT, MAINTENANCE AND CONSERVATION OF MATERIAL
18.1	Upkeepment, maintenance and conservation of material (to be executed on man hour rate basis under preservation) during storage period and till issue to erection contractor shall be included in the contractor's scope as broadly explained below.
18.2	Removal of stored material from boxes/ crates, identification, cleaning/ conservation and replacing boxes/ crates and stacking on floors/ racks as required under the BHEL store requirement as per the preservation manual/ site engineer's instruction.
18.3	Cleaning of corroded surfaces by rubbing with recommended grades of emery papers, removing the conservative greases, damaged coatings of paints or varnish, cleaning/washing of surfaces as required and re-application of anti corrosive paints,

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	protective grease etc as prescribed by BHEL.
18.4	Wherever end caps are found missing, these pipes/ tubes are to be cleaned with compressed air and replacement of protective pellets and end caps to be done. End caps and protective pallets required for pipes shall be provided by contractor.
18.5	All electrical/ C&I panels, motor bearings, slip rings, commutators and other exposed parts shall be protected against moisture ingress and corrosion during storage and inspected periodically. Heavy rotating parts in assembled conditions shall be periodically rotated after ensuring proper lubrication to prevent corrosion due to prolonged storage.
18.6	The preservation painting shall be done as per advice of BHEL engineer and shall normally consist of three operations, eg priming, putting and final painting. Coating of paints or varnish shall be done either by spray gun or by brush or by dipping as the case may be.
18.7	The preservation painting shall be done as per the advice of BHEL engineer and shall normally consist of three operations, eg priming, putting and final painting. Coating of paints or varnish shall be done either by spray gun or by brush or by dipping as the case may be.
18.8	Parts conserved by grease shall be additionally protected by wrapping with two layers of paraffin paper wherever advised. Contractor will provide paraffin papers.
18.9	While applying the anticorrosive layer, by any of the above methods, care shall be taken that the coating is uniform and without overflow and gaps.
18.10	The process of preservation painting and re-conservation of surfaces shall be done by experienced workers and supervisors.
18.11	Total scope of work for preservation/ conservation may be of approximately 35,000 (thirtyfive thousands) man hours. Monthly programme of materials to be conserved will be given by BHEL in the beginning of every month. Contractor can not claim any compensation for any increase/ decrease in the scope of work under such monthly programme. The contractor shall inspect all consignments once in every four months or the period advised by BHEL site engineer to ensure that they are in proper order. After inspection, parts and sub assemblies shall again be re-conserved and packed as before, if required. However, service of only inspection of the consignment shall be deemed to have+ been included in the rate quoted by the bidder.
18.12	Preservatives and consumables like paints, greases, varnish, thinners for paints, silica-gel, white spirit, paraffin paper and all other preservatives and consumables, required for upkeepment, maintenance and preservation/ conservation work shall be provided by contractor at his own cost.
18.13	All the necessary tools & plants and equipment, except those mentioned to be given by BHEL free of cost, including operator, fuel, consumables etc. for running the same, required for the above job of upkeepment, maintenance and preservation/ conservation work shall be arranged by the contractor at his own cost.
18.14	It is clarified that special preservatives as received from BHEL manufacturing units for specific products/ equipment will be provided free of cost. All other preservatives and consumables as indicated above has to be arranged by contractor at his cost.
19.0	PROCEDURE TO BE ADOPTED BY THE CONTRACTOR IN CASE OF SHORT/ DAMAGED NON-DELIVERED CONSIGNMENTS FOR DESPATCHED BY ROAD
19.1	NON- DELIVERED CONSIGNMENTS PROCEDURE
19.1.1	Apply for and obtain a certificate of non-delivery from the road carriers.
19.1.2	File a notice of claim on the carriers sending the same to their registered office by Registered Post AD and forwarding a copy to their delivery office, immediately or within 6 months from the date of Lorry Way Bill.
19.1.3	Following documents should be obtained and submitted to BHEL in charge at site.
19.1.3.1	Original Non-delivery certificates.
19.1.3.2	Copy of claim notice filed on the carriers.
19.1.3.3	Postal acknowledgement card or reply received for the claim notice.
19.1.3.4	If the package originally non-delivered is traced and offered for delivery at a later date apply for obtaining open delivery in respect of the same before clearance.
19.2	SHORT DELIVERY (NON-DELIVERY OF A FEW PACKAGES IN CONSIGNMENT)

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19.2.1	PROCEDURE
19.2.1.1	Obtain a certificate of short delivery from the road carriers.
19.2.1.2	File a notice of claim on the carriers sending the same to their registered office by Registered Post with AD and forwarding a copy to their delivery office immediately or within 6 months from the date of Lorry Way Bill.
19.2.2	Documents to be submitted to BHEL site engineer.
19.2.2.1	Original short delivery certificate.
19.2.2.2	Copy of claim notice filed on the carriers.
19.2.2.3	Postal acknowledgement or reply received, for the claim notice.
19.2.2.4	If the package originally short delivered is traced out and offered for delivery at a later date, apply for & obtain open delivery in respect of the same before clearance.
19.3	SHORT/ DAMAGE IN PACKAGES DELIVERED FROM THE ROAD CARRIERS
19.3.1	Apply for and obtain open delivery from the road carriers.
19.3.2	If open delivery is refused.
19.3.2.1	Arrange for survey at the carrier's godown by a licensed insurance surveyor after giving notice in writing.
19.3.2.2	Take delivery under protest in writing against acknowledgement or by Registered Post with AD.
19.3.2.3	Make necessary endorsement regarding the loss/ damage on the reverse of the consignee copy of the lorry way bill before surrendering it to the carriers.
19.3.3	File a notice of claim on the carriers sending the same to their registered office by Registered Post with AD and forwarding a copy to the delivery office immediately or within 6 months from the date of lorry way bill.
19.3.4	Documents to be submitted to BHEL site incharge
19.3.4.1	Claim form.
19.3.4.2	Insurance policy/ certificate in Original (If specific document is issued).
19.3.4.3	Original open delivery certificate and report of Insurance survey if any conducted to the final destination.
19.3.4.4	Following additional documents required in the event of refusal of open delivery by carriers. <ul style="list-style-type: none"> • Copy of notice given to the carriers advising about the survey at their godown before clearance. • Survey report of the licensed insurance surveyor with the bill / receipt for payment of survey fee and expenses. • Copy of letter of protest extended to the carriers with the postal acknowledgement received thereto. • Photocopy of the lorry waybill with the endorsement of the discrepancies made thereon.
20.0	RECONCILIATION OF MATERIALS
20.1	The contractor shall submit a reconciliation statement of items received by them and issued to various erection agency (through computerized system of BHEL namely SOMS) with each RA bill.
20.2	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.
21.0	PROGRESS OF WORK
21.1	During the course of work if the progress is found unsatisfactory, or if the target dates fixed from time to time for every milestone are to be advanced or in the opinion of BHEL, if it is found that the workmen employed are not sufficient, BHEL will induct required additional workmen, to improve the progress and recover them from bidder's bills, all charges incurred on this account including all expenses together with BHEL overheads.
21.2	The contractor shall submit monthly progress reports as per the Format given in relevant annexure of the tender, together with requisite nos of photograph, as detailed elsewhere, showing material receipt position and location, to the Construction Manager with a copy to Project Manager at BHEL/ PSER/ HQ.

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	Manpower reports, material reports, consumables reports, and other reports considered necessary by the Engineer will also have to be submitted with a copy to Project Manager at BHEL/ PSER/ HQ.
21.3	The manpower reports shall clearly indicate the manpower deployed category wise daily specifying also the activities in which they are engaged. The periodicity of the reports will be decided by BHEL engineer at site.
21.4	Bidder shall arrange for weekly progress review meetings with the engineer at site during which actual progress during the week vis-à-vis scheduled programme shall be discussed for action to be taken for achieving targets. The programme for subsequent week shall also be presented by bidder for discussions. Bidder shall constantly update / revise his works programme too meet the overall requirement and suit the material availability.
21.5	Bidder shall submit a detailed monthly plan after discussion with BHEL engineer and the same has to be forwarded by the first week of the month (Working month or calendar month).
22.0	LAND
22.1	Availability of land within plant boundary is very limited and the contractor has to plan & use the existing land considering the use of land by other contractors and the storage of plant machineries and materials. The existing land shall be shared by all erections agencies. The same will be reviewed by BHEL and allotted to the extent available/ considered necessary free of cost. Contractor shall develop these areas for their site office, their own stores etc. Bidder must visit site to assess site condition, prior to quoting.
22.2	Levelled area for storage area for BHEL's material shall be provided as per availability free of cost.
22.3	Land for labour colony shall be arranged by successful bidder at their own. The contractor shall construct labour colony / hutment as per his requirements after obtaining approval of formalities from statutory body. Further, contractor must ensure minimum HSE norms and hygienic sanitary conditions in his labour colony.
22.4	The contractor will be responsible for handing back all lands, as handed over to him by BHEL/NTPC.
23.0	WATER
23.1	BHEL will provide single point supply for construction & drinking water inside the project premises for office free of cost.
23.2	Further necessary network for construction & drinking water system shall be done by the bidder at his own cost.
23.3	Contractor should arrange for water for labour colony of their own.
23.4	BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of water supply and the contractor shall claim no compensation for delay in work for such interruption. Contractor may make standby arrangement for water at their own cost.
23.5	Contractor will have to arrange for storage of water to meet the day-to-day requirement.
23.6	The availability of water (construction as well as drinking) 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.
24.0	ELECTRICITY
24.1	BHEL shall provide construction power free of charge at 415V level at one point. Contractor has to make their own distribution arrangement to draw electricity. Overall area illumination will be provided by BHEL. However, for night working contractor should arrange illumination as and when required by them.
24.2	The bidder shall have to provide earth leakage circuit breaker at each point wherever human operated electrical drives/ T&Ps are deployed.
24.3	The power supply will be from the available grid. BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of power supply/ variation in voltage level and no compensation for delay in work can be claimed by the contractor due to such non-supply on the grounds of idle labour, machinery or any

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	other grounds.
24.4	Bidder will have to arrange sufficient illumination at their own work areas.
24.5	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.
24.6	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.
24.7	Contractor shall make arrangement of electricity of their own for labour colony.
25.0	CONSTRUCTION OF TEMPORARY OFFICE, BIDDER'S OWN STORES ETC
	The contractor shall arrange at their own cost cleaning of area allotted, construction of his temporary office, his own stores, etc and also the watch & ward of all the above. Materials required for the same shall be provided by contractor at their own cost.
26.0	CONSUMABLE
26.1	All consumables, like gas, electrodes, chemicals, lubricants etc required for the scope of work, shall be arranged by the contractor at his cost unless otherwise specifically mentioned in the contract.
26.2	All consumables to be used for the job shall have to be approved by BHEL/ customer prior to use.
26.3	In the event of failure of contractor to bring necessary and sufficient consumables, BHEL may arrange for the same at the risk & cost of the contractor. The entire cost towards this along-with overhead shall be paid by the contractor or deducted from the contractor's bills.
27.0	TEST CERTIFICATE FOR T&P
	All T&P, lifting tackles and pulling devices to be deployed by the contractor must bear valid/ latest test certificates for their suitability, and the documents shall be preserved at site.
28.0	MMD
	The contractor shall ensure deployment of reliable & calibrated instrument, measuring and test equipment (MMD). The MMD shall have test calibration certificate from authorized/ Govt approved agencies. The contractor shall also keep provision of alternate engagement for such MMD so that the work does not suffer when a particular MMD is sent for calibration. Re-testing/ re-calibration shall also be arranged by the contractor at their own cost at regular interval during the period of use as advised by BHEL.
29.0	ISSUE OF T&P
29.1	Subject to free availability at site, BHEL may provide T&Ps for unloading of item/ (s) free of cost as per relevant annexure of the tender. The T&Ps to be provided by BHEL shall be shared by various other contractors and the contractor shall plan his activities accordingly in co-ordination with BHEL site engineers.
29.2	T&Ps returned in defective/ damaged condition (defect/ damage occurred during use due to negligence of contractor) shall be rectified promptly to the full satisfaction of BHEL engineer failing which suitable recovery along with BHEL overheads will be made from contractor's bills/ dues.
29.3	BHEL shall provide, lubricants, mobil, cardium compound, hydraulic oil, air and fuel filter etc on free of cost basis for the crane(s). Contractor has to provide fuel within the quoted rates. Regular maintenance and break down maintenance (not attributable to the contractor) of the BHEL crane is excluded from the scope of the contractor. However, necessary services as required for shortening/ extending of crane boom are included in the scope of contractor.
29.4	BHEL shall provide crane operator for this crane free of cost. However, the contractor shall bear only overtime charges, if any, for the operator provided by BHEL for services provided beyond the prescribed working hours of cranes. Such over time deployment shall be with prior intimation and consent of BHEL.
29.5	In case of exigency leading to crane operator not being available with BHEL, the

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	contractor will have to deploy experienced crane operator after due permission of BHEL engineers. During such operation, the contractor shall have to take the full responsibility of safe operation of crane.
29.6	In case of non-availability of crane to be provided by BHEL due to break down, major overhauls distribution pattern or any other reason, the contractor shall plan/ augment/ alter his activities to meet targets in consultation with BHEL and no compensation will be admissible on above ground.
29.7	Consolidation of ground and arrangement of sand bag filling etc. for safe operation/ movement of equipment including cranes/ trailers etc shall be the responsibility of the contractor at his cost.
29.8	In the event of BHEL issued T&P, measuring instruments etc the contractor and BHEL shall maintain joint protocol about the condition of all T&P, instruments etc taken from BHEL's custody and return to BHEL after use. The contractor shall not use this equipment for purposes other than the scope of work given in this tender document. It is the responsibility of contractor to keep these equipments always in working condition and ensure their safe return in working condition to BHEL's store subject to normal wear & tear.
29.9	After use of T&P items issued by BHEL the same shall be returned to BHEL in good working condition subject to normal wear & tear failing which recoveries at the book value of the item or the market rate prevailing at the time of returning the items, whichever is higher shall be made from the payments due to the contractor from BHEL from this contract or from any other contract.
30.0	TOOLS & PLANTS (TO BE PROVIDED BY CONTRACTOR)
30.1	Tentative list of tools & plants to be deployed by bidder is furnished in the tender. It may be noted that the list is not exhaustive and is only for general guidance. The contractor is required to provide all necessary T&P (other than those specified to be provided by BHEL) measuring (calibrated) instruments & handing equipments for timely completion of total work as per contract. In case of project requirement, some activities may have to pre-pone. In such cases the contractor may have to deploy additional T&P. Quoted rate shall be inclusive of such requirements.
30.2	In the event of any failure of the part of contractor, BHEL may at his discretion also terminate the contract on this ground and take out any or whole amount of the contract from the scope of contractor. In the event of failure of contractor to deploy necessary and sufficient T&P/ MMDs, BHEL will be at liberty to arrange the same at the risk & cost of contractor including transportation cost of same from any of BHEL site/ other agency & charges as applicable shall be deducted from contractor's RA bill. Decision of BHEL in this regard will be final & binding on contractor.
30.3	T&P shown in the list of tender are minimum requirement. Further requirement will be reviewed time to time at site and vendors will provide additional T&P/ equipments to ensure completion of entire work within schedule time without any financial implication to BHEL. Contractor will give advance intimation & certification regarding capacity etc prior to dispatch of heavy equipment.
30.4	For balance T&P as per above list and any other Item required for carrying out the job, no separate payment shall be made and deployment of same will be within quoted rate.
30.5	In case of non-deployment within the period indicated, BHEL reserves the right to arrange the same at the vendors risk & cost or suitable recoveries will be made from RA bills at site.
30.6	All T&P and all MMDs, which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by the contractor at his own cost in working condition.
30.7	In the event of non mobilisation of any T&P by the successful bidder and as a result progress of work is suffered, BHEL reserve the right to deduct suitable amount from the dues of contractor. BHEL's decision in this regard shall be final & binding on contractor.
30.8	It is not obligatory on the part of BHEL to provide any tools and tackles or other materials other than those specifically agreed to do so by BHEL. However,

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	depending upon the availability, BHEL / BHEL's Customer handling equipment and other plants may be made available to the contractor on payment of higher charges as fixed, subject to the conditions laid down by BHEL/Customer from time to time. Unless paid in advance, such hire charges, if applicable shall be recovered from contractor's bill /security deposit or any other payment in one installment.
31.0	INSURANCE
31.1	BHEL shall arrange comprehensive MCE (marine cum erection) Insurance Policy for total project supply & services including balance of plant package covering transit risks & loss, destruction or damage during handling at Site, Storage, civil works ,erection, testing and commissioning up to trial operation completion of unit including theft, sabotage, fire, lightning and other natural calamities.
31.2	Contractor shall report to BHEL in writing any damages to equipment/components on receipt, storing, and during withdrawal of the materials from stores, in transit to site and unloading at place of work and during erection and commissioning till trial operation completion including handing over. The above report shall be as prescribed by BHEL site management. Any consequential loss arising out of non-compliance of this stipulation will be borne by contractor.
31.3	The contractor will take necessary precautions/ due care to protect the material at Project site, while in his custody from any damage/ loss till the same is handed over to BHEL/ customer at Project site. For lodging/ processing of insurance claim the contractor will submit necessary documents. BHEL will reserve the right to recover the loss from the contractor as detailed below in case the damage/loss is due to negligence/ carelessness on the part of the contractor. In case of theft of material under contractor's custody, the same shall be reported to police by the contractor immediately and copy of FIR and subsequently police investigation report shall be submitted to BHEL/ customer for taking up with insurance. However, this will not relieve the contractor of his contractual obligation for the materials in his custody.
31.4	In case the damage/loss/theft of materials are attributable to negligence/failure in discharging the duties and obligations of the contractor, the expenses incurred for repair/replacement of such components in excess of the amount realized from the underwriters, limited to Normal Excess (Deductible Franchise) shall be recovered from the contractor.
31.5	Other conditions of Insurance shall be as per relevant clause of GCC/SCC.
32.0	SECURITY DEPOSIT & PERFORMANCE BOND
32.1	Security deposit shall be as per relevant clause of GCC (Volume-IB).
32.2	Performance bond is not applicable for this tender.
33.0	TIME SCHEDULE
33.1	The materials/ equipments/ components are likely to be received in stages for a period of 34 (Thirty Four) months from the date of start of work, as certified by Construction Manager/Site Engineer, BHEL.
33.2	Bidder has to mobilize and commence the work within 15 (fifteen) days, from the date of intimation by BHEL. The exact date of start of work shall be reckoned based on certificate of Construction Manager/Site Engineer, BHEL.
33.3	During the entire period of contract, bidder shall maintain proper progress, adequate manpower, requisite handling and transportation equipments, tools & tackles and other consumables etc to meet the schedule programme as per the priority given by BHEL engineer.
33.4	The scope of work under this contract is deemed to be completed only when so certified by the site engineer of BHEL. The decision of BHEL in this regard shall be final and binding on bidder.
34.0	MOBILIZATION ADVANCE/ INTEREST BEARING RECOVERABLE ADVANCE
	Not applicable for this tender.
35.0	OVER RUN CHARGES
	Shall be applicable as per GCC subject to minimum amount of Rs 50,000/- per month and maximum of Rs 5,00,000/-per month.
36.0	PRICE VARIATION COMPENSATION (PVC)/ ESCALATION
	Not applicable

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37.0	TAXES, DUTIES ETC
37.1	All taxes excluding GST & BOCW Cess (as specified elsewhere in the tender) but including, Charges, Royalties, any State or Central Levy and other taxes for materials if any obtained for the work and for execution of the contract shall be borne by successful bidder and shall not be payable extra by BHEL. Any increase of above at any stage during execution of contract, including extension of the contract, shall have to be borne by successful bidder contractor. Bidder's quoted/ accepted rates/ price shall be inclusive of all such requirements.
37.2	GST along with Cess (as applicable) legally leviable & payable by successful bidder as per GST Law shall be paid by BHEL, extra. Hence, bidder shall not include GST along with Cess (as applicable) in their quoted rates/ price.
37.3	Successful bidder shall furnish proof of GST registration with GSTN Portal covering the services under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by successful bidder on BHEL for this project / work.
37.4	Since GST on output will be paid by BHEL separately as enumerated above, bidder's your quoted rates / price should be after considering the Input Credit under GST law at bidder's end.
37.5	TDS under Income Tax shall be deducted at prevailing rates on gross invoice value from the running bills (RA bills) unless exemption certificate from the appropriate authority / authorities is furnished.
37.6	TDS under GST shall be deducted at applicable rates on gross invoice value from the running bills (RA bills).
37.7	Bidder shall note that GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act & Rules referred thereunder) wherein the 'Bill To' details shall encompass following. BHEL GSTN – Refer attached GSTN code table of BHEL. Name - BHARAT HEAVY ELECTRICALS LIMITED Address - Shall be intimated later. Specific details of BHEL GSTN, Name and Address as stated above, have been specified elsewhere in the tender.
37.8	Successful bidder to intimate immediately on the day of removal of goods (in case of any supply of goods) to BHEL along with all relevant details and send a scanned copy of Tax Invoice to BHEL through following communication mode for enabling BHEL to meet its GST related compliances. Portal address. and Email address – Shall be intimated later. Specific details of above shall be intimated to successful bidder by BHEL at appropriate juncture.
37.9	In case of delay in submission of above mentioned documents on the date of despatch, BHEL may incur penalty / interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from successful bidder, in case such delay is not attributable to BHEL.
37.10	In case of raising any Supplementary Tax Invoice (Debit / Credit Note), successful bidder shall issue the same containing all the details as referred to in Section 34 read with Section 31 of GST Act & Rules referred there under.
37.11	Successful bidder shall comply with the Time Limit prescribed under the GST Law and rules thereof for raising of the Tax Invoice. If any supply of goods is applicable, successful bidder shall also ensure prompt delivery of goods after despatch.
37.12	Bidder shall note that in case GST credit is delayed / denied to BHEL due to delayed / non receipt of goods and / or Tax Invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons, not attributable to BHEL, GST amount shall be recoverable from successful bidder along with interest levied/ leviable on BHEL, as the case may be.
37.13	Successful bidder shall upload the invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act. Bidder shall note that in case of delay in declaring such invoice in your return and GST credit availed by BHEL is denied or reversed subsequently as per GST Law, GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from the successful bidder along with interest levied / leviable on BHEL.
37.14	Way Bill: Successful bidder to arrange for way bill / e-waybill for any transfer of

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	goods for the execution of the contract. Successful bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants & machinery at site for execution of the works under this contract, Road Permit / Way Bill, if required, shall be arranged by successful bidder and BHEL will not supply any Road Permit/ Way Bill for this purpose.		
37.15	Any new taxes & duties, if imposed subsequent to due date of offer submission as per NIT & TCN, by statutory authority during contract period (including extension, if the same is not attributable to you), shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL. However, you shall obtain prior approval from BHEL before depositing new taxes and duties.		
37.16	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.		
38.0	TERMS OF PAYMENTS		
38.1	Contractor should submit his monthly on account bills with all the details required by BHEL on specified date every month covering progress of work in all respects and areas from the 25 th of previous calendar month to 24 th of the current month. The contractor shall submit his bills once in a month duly furnishing the following information: i) Work order no and date. ii) Challan no and date. iii) Work completion report wrt challan. iv) Consolidated monthly report as per clause no. 13.2.2 containing following details: a) Consignment no and date b) Description of materials. c) No. of packages as per shipping docs/ challan/ consignment note. d) Gross weight (MT) as per shipping docs/ challan/ consignment note. e) Location of material. v) Consolidated monthly report as per clause no. 13.2.3 & 13.2.4 vi) Amount claimed. xi) Recoveries such as hire charges, demurrage, fine/ penalty etc, if any. xii) Certified man-hour regarding upkeepment, maintenance and preservation etc.		
38.2	The RA bill, complete in all respects accompanied by BHEL engineer's certificate/ jointly signed measurement sheet will be paid, as indicated elsewhere, subject to its completeness & correctness in all respects. The measurement will be taken by BHEL engineer as per relevant clause of GCC and certify regarding the actual work executed in the measurement book and bills for work. All admissible recoveries/ adjustments etc shall be made from the interim payable amount of each RA bill on completion of item of work. Contractor shall make his own arrangement for making payment of impending labour wages and other dues in the meanwhile.		
38.3	For all items of work as per Price Schedule, interim payment shall be made as per following break up. The following break up is only for the purpose of progressive payment and should not be construed as total scope of work. The total scope of work is as detailed in this tender document and shall be completed by the contractor without making any reference to the following break-up.		
	Sl. No. of rate schedule	% of payment	
38.3.1	1.1, 1.2, 1.3, 1.4, 2.1 a, b & c; & 3.1	Unloading, re-loading, transporting, un-loading to covered store/ semi-covered store/ open storage yard/ place or place of erection, as required, as per direction of BHEL.	40%
		Updation of store documents (both hard & soft) of above.	10%
		Proper stacking as per direction of BHEL.	20%
		Verification, as required, as per direction of BHEL.	20%
		Updation of store documents (both hard & soft) after stacking & verification.	10%

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38.3.2	1.6, 1.7, 2.3 (a,b,c), 2.4 (a,b,c), 3.3, & 3.4	Material re-shifting/ re-stacking.	90%
		Updation of store documents (both hard & soft) of above.	10%
38.3.3	1.5, 2.2 (a,b,c), & 3.2	Issue of material to erection agency after identification of location	60%
		Updation of store documents (both hard & soft) of above.	40%
38.3.4	5.0	Providing manpower for preservation/ conservation/ maintenance.	90%
		Updation of store documents (both hard & soft) of above.	10%
38.3.5	4.0 & 6.0	On execution of items.	100%
38.4	Out of above break up for payment, 5% will be retained from each bill which will be released on completion of guarantee period. However, this 5% payment can be released against submission of bank guarantee valid for the guarantee period as stated above in prescribed proforma subject to receipt of certificate that all works are completed in all respects. The submission of bank guarantee towards above is separate and the bank guarantee towards security deposit cannot be utilized for this purpose. The security deposit / Retention amount will be refunded as per GCC.		
38.5	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 vendor 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.		
38.5.1	0.7 % shall be paid on compliance of house keeping of vendor's working area and store/ office areas.		
38.5.2	0.3 % shall be paid on compliance of general illumination of vendor's working area and stores, office area.		
38.5.3	0.2 % shall be paid on compliance of applicable OHSAS requirement as per guideline of BHEL/ PSER and as specified in the tender.		
38.5.4	0.3 % shall be paid on compliance of applicable Safety requirement as per guidelines of BHEL/ PSER and as specified in the tender.		
38.6	Contractor's RA bill, complete & correct in all respects, certified by BHEL engineer, shall be paid after 45 days of date receipt of bill subject to its completeness & correctness.		
38.7	BHEL at its discretion may further split up the above percentages and effect payment to suit the site condition, cash flow requirement and according to the progress of work.		
39.0	CONTRACT PRICE		
39.1	The bidder shall quote their rates in compliance with specification and terms & conditions of tender and strictly in accordance with prescribed Price Schedule, Volume-III.		
39.2	The quantities of the various items mentioned in the BOQ cum rate schedules of items of Volume-III are approximate, based on very preliminary information and may vary to any extent or to be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of the work executed under any part of the this contract including extra items, if any, but excluding any price variation, remains within +/- 15 % (plus/minus fifteen percent) of the awarded price as per LOI / WO.		
39.3	The work executed will be priced at the unit rate quoted by the contractor and accepted by BHEL. For the purpose of payment, the gross weight indicated in RR/ LWB / PWB will be taken into account for calculating the tonnage handled.		
39.4	All other provisions of GCC on quantity variation shall be applicable for this tender.		
40.0	GUARANTEE		
40.1	Even though the work will be carried under supervision of BHEL engineers, bidder will be responsible to ensure proper handling, storage/ upkeepment, preservation of		

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	materials/ equipment, timely lodging of FIR/ MDRs for lodging claims with the underwriter (by BHEL) during the entire contract period and shall guarantee the work done for a period of 12 months from the date of start of guarantee period, as certified by the engineer for good workmanship and shall rectify free of cost all defects due to faulty material management. In case bidder fail to make good the defective works within the time specified by the engineer, BHEL may proceed to undertake the remedial actions for such defective works at bidder's risk & cost without prejudices to any other rights and recover the same from SD/ other dues.
40.2	The guarantee period shall start from the date of completion of the scope of work under this contract which is to be certified by the BHEL engineer.
40.3	This supercedes relevant clause (Guarantee/ warranty) of the GCC.
41.0	SPECIFIC TERMS FOR CRANE DEPLOYMENT
41.1	The crane shall be provided with operator, helper, service & maintenance staff, fuel & all other consumables. The crane should be in good working condition.
41.2	DEPLOYMENT SCHEDULE- As per Annexure IV or within 30 days from the date of written notice from Construction/ Project Manager, BHEL.
41.3	The crane operation shall be executed under the usual conditions prevailing in major power plant construction and in conjunction with numerous other operations at site. The contractor and his personnel shall co-operate with all BHEL personnel, BHEL's customer, customer's consultants and all other contractors, coordinating the crane movements with others and work in a manner that shall not delay or hinder the progress of work of the project.
41.4	The contractor shall execute the work in most substantial and workman like manner. The materials and equipment of BHEL by the crane shall be handled with care and diligence, while same are handled by the crane.
41.5	Towards fulfillment of the relevant safety norms, the contractor is required to submit valid test certificate for the crane to be deployed at site. On deployment, load test is to be conducted at site for which necessary load materials will be provided by BHEL free of cost. Local transportation of load materials shall be in the BHEL's erection subcontractor's scope.
41.6	Operation, maintenance, fuel (engine on condition) and all consumables required for regular daily running of the crane as per the working hours mentioned are to be provided by the contractor. The agency should provide adequate no.of operators, helpers and maintenance personnel to ensure trouble-free uninterrupted operation, services and maintenance of the crane at site. In case the contractor fails to provide the required fuels, consumable etc in time, BHEL reserves the right to supply the same and deduct the cost from contractor's bill with overhead, as required.
41.7	Normally the maintenance/ greasing activities in the crane shall be done by the contractor during recess period so that no working day is lost for outage of the crane. However, any breakdown/ repair of the crane shall be immediately attended by contractor at his own cost & risk. The contractor is to maintain stock of adequate spares & consumables with the required tools & tackles at site for this purpose.
41.8	In case of operator's absence the contractor shall arrange alternative immediately for continuation of site work so as not to hamper the time scheduled erection program.
41.9	In case there is a total failure of the crane, the contractor should replace the same and bring substitute crane within a deadline of 20 days from outage. In the case of contractor's failure to do so, BHEL shall make alternative arrangements at the risk & cost of the contractor.
41.10	Necessary insurance coverage for the crane including Third Party liability and for the workmen (covering Workmen's Compensation Act) engaged by the contractor are to be taken at his cost and copy of the same should be submitted to BHEL at site before work commencement. If any accident/ injury occurs to any other persons/ public due to proven negligence/ non-adherence to relevant safety and other precautions on the part of contractor/ its employees, the contractor shall remain liable to pay necessary compensation and other expense, as decided by appropriate authorities.

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41.11	The contractor shall follow & comply with all Safety Rules of BHEL and their customer, relevant provisions of applicable laws pertaining to safety of workmen, employees, plant and equipment as may be prescribed from time to time without any demur, protest or contest or reservation. In case of any conflict between statutory requirement and Safety Rules of the client referred above, the later shall be binding on the contractor unless the statutory provisions are more stringent.
41.12	Any loss or damage to BHEL or customer's property due to negligence of the crew employed by the contractor is attributable to the contractor. BHEL shall not be responsible for any accident/ injury to the contractor's crew/ staff during operation or otherwise. Contractor has to assume full responsibility of the safety of their crew/ staff and to comply with the security/ safety regulations of BHEL and others at site.
41.13	BHEL shall provide space free of cost to the contractor at site, where they are to maintain a shed/ container for working facility of their personnel and keeping/ storing of their required hand tools, spares, slings, consumables etc. as necessary. General watch & ward/ security services may be provided by BHEL.
41.14	Contractor shall have to arrange entry gate passes for their crew/ staff at the construction plant site. Necessary support in regard to forwarding of documents shall be given by BHEL.
41.15	Electrical power/ illumination for your crane operation/ maintenance works at site shall be provided by BHEL at free of cost basis. However, the crane should have it's own lights for movement/ working in the working area at site.
41.16	The contractor shall comply with the plant security regulations in force at site in entry, exit, movement & working inside the plant premises. The contractor shall also ensure that all persons engaged by him for the work behave properly with BHEL and their client. In case of any reported misbehavior, contractor shall immediately withdraw such employee/ person from work.
42.0	REVISION ON ACCEPTED CONTRACT RATE
	Rate revision is not applicable for this tender.
43.0	OTHER TERMS
43.1	All other term & conditions of this specification, not mentioned above shall be governed by the pertinent provisions of GCC, Volume-IB.

Annexure-I

	<p>SAFETY PLAN</p>
	<ol style="list-style-type: none"> 01. Safety Policy of the Contractor to be enclosed: 02. When was the Safety Policy last reviewed: 03. Details of implementation procedure / methods to implement Safety Policy / Safety Rules: 04. Name, Qualification, experience of Safety Officer 05. Review of Accidents Analysis Method, Methods to ensure Safety and Health: 06. Unit executive responsible to ensure Safety at various levels in work area: 07. List of employees trained in safety employed before execution of the job. Give the details of training: 08. Safety Training Targets, Schedules, methods Adopting to providing safety training to all employees: 09. Details of checklist for different jobs / work and responsible person to ensure compliance (copy of checklist to be enclosed): 10. Regular Safety Inspection Methods and Periodicity and list of members to be enclosed: 11. Risk Assessment, Safety Audit by Professional Agencies, Periodicity: 12. Implementation of Recommendations of Audit / Inspections. Procedures for implementation and follow up: 13. Provision for treatment of injured persons at work site: 14. Review of overall safety by top Management and Periodicity: 15. System for Implementation of Statutory legislations: 16. Issue of PPEs to employees, Periodicity / stock on hand etc:

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ANNEXURE-II
APPROXIMATE WEIGHT SCHEDULE TO BE HANDLED

SL NO	MANUFACTURING UNIT/SOURCE	DESCRIPTION OF MAJOR SUPPLIES	APPRX WEIGHT (IN MT)
01	RANIPET, PIPING CENTRE, HYDERABAD, BHOPAL, PEM (-NON-BHEL PKG), EDN,JHANSI, PEM, RUDRAPUR,EPD, AND ASSOCIATED VENDORS	FGD SYSTEM EQUIPMENTS & AUXILIARIES, STRUCTURES, FANS, PUMPS, MOTOR, PIPING & OTHER EQUIPMENTS, BUS DUCTS, BATTERY ETC AND ELECTRICAL AND CONTROL PANELS, CABLES ETC.	52496 MT
02	PSER	LUBRICANTS, CHEMICAL, FURNITURE, OFFICE ITEM, T & P ITEMS AND OTHER MISCELLANEOUS ITEMS	50 MT
		REINFORCEMENT/STRUCTURAL STEEL	400 MT
		CEMENT	100 MT

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ANNEXURE-III

**TENTATIVE LIST OF T&P TO BE PROVIDED BY BHEL FREE OF COST
INSIDE PLANT BOUNDARY (ON SHARING BASIS)**

- In specific cases where the materials can't be handled by 18 MT pick & carry type tyre mounted mobile crane, BHEL shall provide suitable capacity crane same free of cost along with operator to unload and load consignment at open storage yard. However, contractor has to provide fuel within the quoted rates.
- No any other T&Ps shall be provided by BHEL.

ANNEXURE-IV
TENTATIVE LIST OF T&P/ MATL HANDLING EQUIPMENT TO BE PROVIDED
BY THE CONTRACTOR AT HIS COST

1.0 TOOLS & PLANTS

SI no	Description	Qty	Tenative Deployment schedule from the date of start of work
1.0	10/12/14/18 MT pick & carry type tyre mounted mobile crane.	02	1 st – From start of work (SOW). 2 nd – As per requirement
2.0	40 T trailer	01	As per requirement
3.0	20 T trailer	01	As per requirement
4.0	Trucks.	As per requirement	As per requirement
5.0	Winches.	As per requirement	As per requirement
6.0	D-shackles.	-do-	-do-
7.0	Slings.	-do-	-do-
8.0	Max puller.	-do-	-do-
9.0	Pulley blocks.	-do-	-do-
10.0	Jacks.	-do-	-do-

2.0 MEASURING AND MONITORING DEVICES (MMD)

As per requirement, to be finalized at site.

NOTE

1. For T&P as per above list and any other Item required for carrying out the job, no separate payment shall be made and deployment of same will be within quoted rate.
2. In addition to the above necessary lifting tackles like slings, D-shackles, chain pulley blocks, tripods etc. are to be arranged by bidder. T&P shown in the above mentioned list are minimum requirement. Further requirement will be reviewed time to time at site and vendors will provide additional T&P/ equipments to ensure completion of entire work within schedule time without any financial implication to BHEL. Vendor will give advance intimation & certification regarding capacity etc prior to dispatch of heavy equipment.
3. The capacity of the cranes indicated are as per load chart and the same duty are to be performed during use.

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

SL NO	DESCRIPTION
1.0	PVC
2.0	Kerosene
3.0	Jute
4.0	Tape
5.0	Brush
6.0	Emery paper
7.0	White finishing enamel
8.0	Wire brush
9.0	Weatherproof and fireproof covering material
10.0	Grease
11.0	Varnish
12.0	Silica gel
13.0	White spirit
14.0	Tarpauline(Flame Resistant tarpaulin as per IS 16126)
15.0	Zinc primer Red oxide Paints
16.0	Thinners For Paints
17.0	Parafin paper
18.0	End caps

NOTE

The above list is not exhaustive and all required the consumables required to complete the work shall have to be arranged by the successful contractor at his cost.

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

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

Sub	No Deviation Certificate.	
Job	Material Management work, consisting of receipt, unloading, handling, verification, storage, issue, record maintenance, etc of materials of FGD system & its auxiliaries, electrical system, control & instrumentation system, non-BHEL system, steel, cement, construction equipments, miscellaneous items etc. for 5 x 660 mw BARH stage- I & II, STPP.	
Ref	1.0	Tender no PSER:SCT:BAR-M1979:19.
	2.0	BHEL's NIT, vide reference no PSER:SCT:BAR-M1979:7463 Date: 01-08-2019
	3.0	BHEL's TCN-01, vide reference no PSER:SCT: BAR-M1979:TCN-01 Date:12-08-2019
	4.0	BHEL's TCN-02, vide reference no PSER:SCT: BAR-M1979:TCN-02 Date:20-08-2019
	5.0	All other pertinent issues till date.

Dear Sirs,

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

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

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

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

Thanking you,

Yours faithfully,

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