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These technical conditions of contract 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 of 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
<b>1.0</b>	<b>PROJECT SYNOPSIS AND GENERAL INFORMATION</b>
1.1	<p><u>INTRODUCTION</u>  <u>Bharat Coal Gasification and Chemicals Limited (BCGCL) is setting up COAL TO AMMONIUM NITRATE COMPLEX, AT LAKHANPUR, ODISHA (INDIA)</u></p> <p><u>Location &amp; Approach to Site</u>  Plant site is located at Lakhanpur in Jharsuguda district of Odisha on the National Highway NH-49. NH-49 is passing at about 10 km from the site. The nearest railway station Belpahar is 10 km from the site. Nearest air port, Veer Surenda Sai Airport, 38 km, approx 1.5 hours journey by road/ rail. Nearest sea port Paradip is 450 km by rail/road from the site. Plant is situated at 21°46'0"N Latitude and 83°46'0"E Longitude.</p>
<b>2.0</b>	<b>EVALUATION OF BID AND AWARDING</b>
2.1	The bidder shall quote their total price strictly in accordance with prescribed Price schedule of Volume-III (Latest revision). Total price for the tendered scope of work will be considered for evaluation and awarding.
2.2	BHEL shall place separate orders for (i) Package-A [(Supply part (Sch-3), & Service part (E&C) (Sch-4)] & (ii) Package-B [(O&M (Sch-5)] as per corresponding price schedules, i.e. as per respective schedules of Volume-III.
<b>3.0</b>	<b>NAME OF WORK</b>
3.1	Supply, Erection, Testing, Commissioning and Operation & Maintenance (O&M), for Construction Power sources & temporary illumination of all the working areas, at COAL TO CHEMICAL PROJECT, BCGCL LAKHANPUR, ODISHA
3.2	The scope broadly covers, procurement, supply (Except those which BHEL will provide as detailed in the clause 4.2 below), erection, testing, commissioning, operation & maintenance of construction power & temporary illumination system, all associated works etc. for the entire construction power network system including required manpower, supervision, tools & plants, consumables, watch & ward, deployment of electrician & helper etc. as per technical specification and terms & conditions of tender taking into account all clarifications, confirmations and agreements till date for construction power network for COAL TO AMMONIUM NITRATE COMPLEX, AT LAKHANPUR, ODISHA (INDIA).
<b>4.0</b>	<b>BROAD SCOPE OF WORK</b>
4.1	The scope broadly comprises of 3 parts – (i) Supply part (except items specifically to be supplied by BHEL); (ii) Service part (E&C) of all items including BHEL supplied Item, and (iii) O&M part.
4.2	The following items will be supplied by BHEL (free of cost) for completion of the construction power network: – (i) 02 Nos. 6.6 kV Ring Main Unit (RMU) (ii) 5 Nos. of 6.6 kV/433V Package substations(PSS) (iii) HT (6.6 kV) Cables for Ring Main System and Interconnection of Packages substations (iv) LT Cables (1.1kV) for power feed to LT Distribution boards, Offices, High Masts feeder, Interconnection of control system (v) High Masts with lighting fixture.
4.3	To meet the construction power requirement of the project, the successful bidder shall construct 6.6 KV substation, and establish 6.6 KV ring main system (through overhead ACSR DOG conductor and underground lines as found suitable in various areas) along with 6.6 KV/ 415 V compact Package Sub-station (PSS) and construct the network for supply of power to BHEL facilities such as Office, Material Yard, Accommodation,

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	lighting mast, etc. from this construction power network.
4.4	<p>The successful bidder shall arrange for transportation, loading and unloading of all materials &amp; equipment supplied by him, required for the successful completion of the job under this tender. BHEL shall not be responsible for the transportation of materials or equipment supplied by the vendor and shall not issue any permit, etc in this regard.</p> <p>The successful bidder shall unload BHEL supplied Items from truck/trailer at site or take delivery of BHEL supplied materials from stores/ storage yard / sheds of BHEL, which is within the plant premises, as applicable, after getting approval of BHEL. He shall also make arrangement for safe custody, watch and ward of equipment after it has been handed over to him till they are fully erected /commissioned.</p>
4.5	<p>All statutory inspection fees, if any, in respect of the job pursuant to this tender shall be paid by the successful bidder. However, any registration fees lawfully payable under the provisions of Indian Electricity Act and other statutory laws and its amendments from time to time during the execution of the job in respect of the plant equipment ultimately to be owned by BHEL, will be reimbursed by BHEL on production of evidence. Any such inspection or registration need to be re-arranged due to the fault of successful bidder or their sub-contractor, the additional fees to such inspection and/ or registration shall be borne by successful bidder.</p>
4.6	<p>All works shall be performed to lines, grades and elevations indicated on drawings (provided by BHEL). The successful bidder shall be responsible to locate and execute the works. Basic horizontal and vertical control points will be established and marked by BHEL at site at suitable points. These points shall be used as datum for the works under the contract. The successful bidder shall inform BHEL well in advance the time, place at which they intend to do work in the area allotted to them so that suitable datum points may be established and checked by BHEL to enable the successful bidder to proceed with works. Any work done without being properly located may be removed and/ or dismantled by BHEL at the expense of successful bidder.</p>
4.7	<p>The successful bidder shall bring to site all equipment, components, parts, materials, including construction equipment, tools &amp; tackles for the purpose of the works under intimation to BHEL. All such goods shall, from the time of their being brought at site, shall be used for the purpose of the works only and shall not on any account be removed or taken away by the successful bidder without the written permission of BHEL. The successful bidder shall nevertheless be solely liable and responsible for any loss or destruction thereof and damage thereto. After the completion of the works, the successful bidder shall remove from the site under the direction of BHEL the materials, such as construction equipment, erection tools &amp; tackles, scaffolding, etc with the written permission of BHEL. If the successful bidder fails to remove such materials, within 15 (fifteen) days of issue of a notice by BHEL to do so then BHEL shall have the liberty to dispose off such materials and credit the proceeds thereto to the account of the successful bidder.</p>
4.8	<p>The intent of this tender is to provide services for execution of the work according to most modern &amp; proven techniques and codes. Omission of specific reference to any method, equipment or material necessary for the proper &amp; efficient service shall not relieve the successful bidder of the responsibility of providing such service/ facility to complete the work or portion of work awarded to them. The quoted/ accepted rates/ price shall deem to be inclusive of all such contingencies.</p>
4.9	<p>The work shall conform to dimensions &amp; tolerances given in various drawings &amp; documents that will be provided during execution. If any portion of works is found to be defective in workmanship &amp; not conforming to drawings/ documents or other stipulations, the successful bidder shall dismantle and redo the work duly replacing the defective materials at their own cost, failing which recoveries, as determined by BHEL, shall be effected from successful bidder's bills.</p>
4.10	<p>It is not the intent of this specification to specify herein all the details of erection, commissioning, etc. However, the system shall conform in all respects to high standards of quality &amp; workmanship for performing the required duties in a manner acceptable to purchaser who will interpret the meaning of drawings &amp; specifications and shall be entitled to reject any work or material, which in their judgments is not in full accordance herewith.</p>

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4.11	Following shall be the responsibility of successful bidder and have to be provided within finally accepted rates/ prices.
4.11.1	Provision as required of all types of labour, supervisors, engineers, watch & ward, tools & tackles, calibrated MMD as specified and otherwise required for the work, consumable, etc.
4.11.2	Proper out-turn as per BHEL plan and commitment.
4.11.3	Completion of work as per schedule.
4.11.4	Good quality and accurate workmanship for proper performance of the equipment.
4.12	Dismantling, removal of debris, levelling, etc of all temporary structures, cables, etc as per instruction of BHEL on completion of work. If successful bidder fails to do so, BHEL will get it done through other agency and the cost along with applicable overhead will be recovered from successful bidder. Decision of BHEL engineer in this regard shall be final & binding on successful bidder.
4.13	BHEL - Power Sector (ER) is ISO 9001-2015 certified company. Quality of work, to customer's satisfaction and as per system requirements are the essence of ISO: 9001-2015 certification. The successful bidder, in all respects will organise their work, systems, environment and process control documentation, T&Ps, measuring and monitoring devices (MMDs), etc as per instructions of BHEL engineer.
4.14	The successful bidder will comply with HSE (Health, Safety & Environment) and Safety requirements of BHEL (as per HSE Manual) and follow all applicable Operational Control Procedures (OCPs) within quoted rate/ price.
4.15	The successful bidder shall construct closed/ semi closed/ open stores shed at the allocated space inside the plant premises for proper storage of items received by them without extra cost.
4.16	The successful bidder should deploy fire extinguishers of required number in their office and work areas.
4.17	All the necessary lifting tackles, tools & plants including cranes, 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 successful bidder at their cost.
4.18	If the successful bidder or their 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 successful bidder shall make the same good at their 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 & cost of the successful bidder and the same shall be deducted from the sums that may be due then or at any time thereafter become due to the successful bidder or even from their security deposit.
4.19	All the necessary tools & plants and equipment including operator, fuel, consumables, etc for running the same, required for the above job. operation & maintenance work shall be arranged by the successful bidder at their own cost.
4.20	Complete list of T&P/ equipment which shall be provided by successful bidder, is to be furnished in detail to Construction Manager, BHEL for review & acceptance. In event of any failure on the part of the successful bidder in providing necessary T&P, etc. BHEL may at their discretion also terminate the contract on this ground and take out any part of contract or entire contract from the scope of successful bidder. Decision of BHEL in this regard will be final & binding on successful bidder.
4.21	The successful bidder will make their own arrangement for communication needs at their site office or residential area/ labour colony.
4.22	All consumables required for the work shall be provided by the successful bidder at their own cost. The consumables supplied like electrodes, gas, cable dressing materials, HT / LT insulation tapes, tag plates, PVC sleeves for wire marking, lugs, fasteners, paints and its consumables by the successful bidder shall be subject to prior approval of BHEL.
4.23	The successful bidder shall provide necessary first aid facilities for all their employees, representatives, and workmen working at site.
4.24	During the period of contract, the successful bidder shall be responsible for keeping the

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	entire area allotted to them clean and free from rubbish debris, etc as per direction of BHEL and to entire satisfaction of BHEL. The successful bidder shall provide proper sanitary arrangement in the work area & office.
4.25	Work procedures that are to be used during the work shall be such, as to minimise fire hazards to the extent practicable. Combustible material, waste and rubbish shall be collected and removed from the site, at least once in every week or at any other periodicity, as per direction of BHEL.
4.26	Successful bidder's supervisory personnel & sufficient number of workers shall be trained for fire-fighting & other safety procedured and shall be assigned specific fire protection duties.
4.27	Successful bidder shall provide & maintain requisite fire protecting equipment of the types & number for their office & work premises. Access to such fire protection equipment is to be given at all times. Compliance of the above requirement shall in no way relieve the successful bidder of any of their responsibility & liabilities to fire accident occurring either to materials, man and equipment or to those of other's working in the area.
4.28	The successful bidder shall have total responsibility for all materials in their custody, and shall ensure protection of all materials from theft, fire, pilferage and any other damage & loss. The successful bidder shall make suitable and adequate arrangement to ensure the above.
4.29	In case of theft of material from store, successful bidder shall lodge FIR with the Police Station (PS) so that Insurance Company do not turn down the claim. In the event of non-admittance of the claim by Insurance Company due to non-availability of FIR, BHEL reserve the right to recover the loss suffered from successful bidder's bills based on the merit of the case.
4.30	The successful bidder shall be responsible to ensure that none of the personnel move beyond the areas marked out for their operation. In case of a need for the successful bidder's personnel to move beyond the area marked for them, the same shall be done with a written permission of the Construction Manager, BHEL.
4.31	If the materials/equipments belonging to the successful bidder are stored in areas other than those earmarked for them, BHEL will have the right to get it shifted to the area earmarked for the successful bidder at their cost.
4.32	For completion of work, the successful bidder may have to work in one or more shifts, at no extra cost to BHEL.
4.33	All the successful bidder employees shall carry identification cards/ gate passes while working at site as per the laid down procedure.
4.34	During the period of the contract, the successful bidder shall be responsible for cutting/trimming of the branches of trees or clearing of any other obstruction that may come in way of O/H lines, PSS & Sub station areas or any other field work for maintaining smooth execution of construction power work.
4.35	The successful bidder shall bring to site all equipment, components, parts, materials, including construction equipment, tools & tackles for the purpose of the minor Civil work like, lighting poles, earth pit, cable trance cutting in rock and soil. Bidder shall arrange all raw materials like cement, sand, bricks, coarse aggregate, reinforcement steel, pipes and its accessories, paint, etc. as are required to complete the works within the quoted price.
4.35.1	<p><b>For 6.6kV Substation:</b> The following work shall be executed to fulfill the project requirement for further installation of electrical components of Construction Power. The bidder is responsible for providing any necessary items that are not specified in the contract but are essential for completing the substation, all within the quoted rate.</p> <ol style="list-style-type: none"> <li>1. Supply &amp; providing of control room lighting with minimum 1 nos 1.5 ton Air conditioner (Window/SplitType) reputed make, 4 nos. of 40W Tube light fitting, 1 nos. 1200 sweep ceiling fans and 3 nos Exhaust Fan and 10 nos of 40W LED street light fitting for outside area lighting, necessary electrical wiring for fans &amp; lights with 04 nos 5A switched socket &amp; 2 nos 15A switched socket in lighting board, incoming main switch, earthing, incoming power connection etc. complete (Light fittings &amp; fans should be of reputed make only). Tentative detail as specified above may vary</li> </ol>

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	as per site conditions. 2. Grouting shall be done for fixing of lighting post.
4.35.2	<b>For Package Sub Station:</b> The following work shall be executed to fulfil the project requirement for further installation of electrical components of Construction Power. The bidder is responsible for providing any necessary items that are not specified in the contract but are essential for completing the substation, all within the quoted rate. Grouting shall be done for fixing of lighting post.
4.35.3	<b>For Lighting Mast:</b> The following work shall be executed to fulfil requirement for installation of Lighting Mast for approx. 30 mtr Hight lighting mast at plant area. While the project specific drawing shall be shared on a later stage.
4.35.4	Deleted
4.35.5	Deleted
<b>4.36</b>	<b>ELECTRICAL INSPECTORATE'S APPROVAL</b>
4.36.1	The contractor shall arrange necessary statutory inspections and obtain certificates for the installation work at his cost. Contractor is responsible for getting Electrical Inspector / statutory authority's approval for all electrical installation covered in his scope.
4.36.2	All electrical installation covered in contractor's scope is to be inspected / approved by the electrical inspector / statutory authority. For getting electrical inspector approval, contractor shall arrange the following: a. Work Completion certificate for all the equipment covered in the contract. b. Details of Equipments (specification) c. Copy of Test results conducted at site for all the equipment. d. Any other documents as required by statutory authority. Any expenditure related to documentation shall be borne by contractor. e. Contractor shall carry out the modifications/rectifications if any as suggested by the authority at his own cost. However, it is not applicable for equipment erected by Mechanical contractor. f. Valid Electrical Contractor's License of Orissa state. g. Valid Supervisory Competency Cerfiticcate.
<b>4.37</b>	<b>Deleted</b>
<b>4.38</b>	<b>SCOPE OF 6.6 KV RING MAIN SYSTEM (FEEDER POWER DISTRIBUTION SYSTEM)</b>
4.38.1	Conducting route survey and Preparation of distribution drawings. All drawings & documents shall be Vetted by BHEL.
4.38.2	Supply and installation of poles, accessories for O/H line forming ring main system.
4.38.3	PSCC poles / RS joist poles/ 6.6 kV GI stay set: The scope of erection work shall include excavation of earth, as per drawing, grouting with concrete of M20/M25, supply of cement, sand, metal etc. to withstand wind velocity and coping of poles etc. complete. All the above required materials shall be supplied by the bidder under the respective E&C item rates as mentioned in the BOQ.
4.38.4	Supply and installation of HT Termination and joining kits, Glands, lugs, etc. required for completion of the system. however Separate item rates are provided for laying of HT and LT cables, HT termination kits, and stringing of ACSR DOG conductor.
4.38.5	Installation of BHEL supplied free issued materials as mentioned below: a. RMU Panel b. PSS c. LT/Control cable d. HT Cables of required Qty
4.38.6	Excavation and refilling of earth including leveling of land if required to mount the Poles for stringing of ACSR DOG conductor to maintain the uniform height of the DOG conductor.
4.38.5	Installation, testing and commissioning of 2 nos RMU, 01 nos Transformer (63 KVA), 01 nos Power Distribution Board at 6.6 KV sub Station.
4.38.6	<b>Remote Control desk/Relay Control Panel.</b>
4.38.6.1	The CRP complete with control switches, indicating lamps, meter, etc and protective relays shall be free floor standing indoor type suitable for mounting on cable trench. The

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	panel shall be of folded & bolted construction with CRCA sheet steel
4.38.6.2	Load bearing front panel: 3 mm thick.
4.38.6.3	Side & top cover: 2 mm thick.
4.38.6.4	Gland plate: 3 mm thick.
4.38.6.5	Rear door: 2.5 mm thick.
4.38.6.6	Base channel/ frame: ISMC 75/ 100 mm
4.38.6.7	Painting: Powder coated epoxy paint thickness 80 microns.
4.38.6.8	DC aux voltage:12/24 V DC (As required SMPS/ Transformer)
4.38.6.9	AC aux voltage:240 V AC.
4.38.6.10	Earthing: Copper bar of 25x6 mm will run throughout board.
4.38.6.11	Wiring: (i) Internal wiring shall be done with 'O' Type lugs & PVC insulated flexible untinned FRLS copper wire, (ii) All CT/ PT circuits shall be wired using 2.5 sqmm wires, (iii) All other circuits shall be wired using 1.5 sqmm wires, (iv) All wires shall be routed through PVC troughs with detachable covers.
4.38.6.12	The Control section shall be complete with MIMIC Diagram of the Sub-station, Control Switches, indication lamps, meters, Annunciators, hooters, etc. as required shall be provided as per design. All indicating lamps shall be clustered LED Type.
4.38.6.13	The control scheme design & supply are under the bidder Scope however all drawings & documents shall be Vetted by BHEL.
<b>4.39</b>	<b>SCOPE OF PACKAGE SUBSTATION (PSS)</b>
4.39.1	Erection & commissioning of PSS at their respective location.
4.39.2	If any loose items supplied along with PSS that are required to be mounted, the same shall be carried out by the contractor at free of charge.
4.39.3	PSS shall be checked thoroughly before charging. After the satisfactory completion of these checks, the LT Board and 6.6 kV VCB shall be energized. The contractor shall arrange all instruments required for testing at his cost.
4.39.4	The Package substations shall be assessed and checked up thoroughly and if any items are found to be damaged/defective/ not working and requires replacement or any internal wiring to be modified, the same shall be carried out by the contractor at free of cost. However, replacement materials shall be arranged by BHEL
<b>4.40</b>	<b>SCOPE OF ERECTION OF L.T. KIOSK (LT DISTRIBUTION BOARD, LIGHTING DISTRIBUTION BOARD)</b>
4.40.1	All items supplied by the successful bidder shall be brand new and shall procure material/ equipment as per specification and from any reputed manufacturer with the approval of BHEL.
4.40.2	LT Kiosk shall be constructed from CRCA sheet. The sheet steel used shall be cold rolled and two mm thick. The construction of LT Kiosk shall ensure adequate rigidity. All components of the LT Kiosk shall be fully mounted inside the panel. LT Kiosk shall have only one operational Front. Door shall be provided to give full access to all the components. Door shall have padlocking arrangement. Good quality synthetic rubber/ neoprene gaskets shall be fixed around the door. The door when closed, shall compress the gasket uniformly.
4.40.3	All metal parts of the panel except current carrying parts shall be bonded together electrically to the earthing stud. Phase barriers of fireproof insulating material shall be fitted in such a manner that it is not readily possible for personnel to touch the phase bus-bars.
4.40.4	The incomers and outgoings of the LT Kiosk are mentioned in the respective item of the BOQ. LT Kiosk shall be provided with earth stud, earth bus bar etc. designated with labels. Applicable standards are IS: 2675, IS: 4237, IS: 13947
4.40.5	The location for erection shall be decided at site, in consultation with BHEL Engineer. Any mounting arrangement like fabrication and fixing of mounting supports shall be arranged by the vendor at his cost
4.40.6	Kiosk shall be checked up thoroughly and if any items are found to be damaged/ defective/ not working and requires replacement or any internal wiring to be modified, the same shall be carried out by the contractor at free of cost. However, replacement materials shall be arranged by BHEL if that Kiosk was supplied by BHEL.
<b>4.41</b>	<b>SCOPE OF WORKS – AREA LIGHTING AND YARD LIGHTING</b>

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4.41.1	Lighting poles for flood lights shall be of steel tubular swaged type 09-metre-long steel poles as per applicable standard. The steel poles shall be coated with bituminous preservative paint on the inside as well as outside surface. Exposed outside surface of steel poles shall be painted with one coat of red lead oxide primer. After installation, two coats of Aluminium paint shall be applied.
4.41.2	The lighting poles shall be erected at the locations shown in the layout drawing (This drawing is in the scope of bidder). The scope of erection work shall include excavation of earth, as per drawing, grouting with concrete M20/ M25, supply of cement, sand, metal etc. to withstand wind velocity, mounting of assembled fittings, wiring/ cabling from junction box at the bottom of pole up to the lighting fixture, installation of 50mm dia of medium thickness GI pipe for cable protection from trench to junction box for loop-in-loop-out cable. All the above required materials shall be supplied by the bidder under the respective item rates as mentioned in the BOQ.
4.41.3	Unit rate quoted for Erection of lighting pole includes Earthing of lighting pole Junction boxes and lighting fixtures, in compliance with IE rules and applicable Indian Standard. Each lighting pole JB shall be earthed by 25x3mm GI Flat bonded to 25 mm dia GI earth electrode of 3-meter length driven vertically in the ground. 14SWG GI wire shall be taken from fixture to JB including fixing of clamps.
4.41.4	Luminaires shall be of continuous trouble-free operation under atmospheric conditions, without reduction in lamp life or without deterioration of materials and internal wiring. Fixtures shall be provided with outdoor type weather proof box with IP-54 or better. Applicable standards are IS: 1913, IS: 1777, IS: 4012, IS: 4013.
<b>4.42</b>	<b>TESTING AND COMMISSIONING WORKS</b>
4.42.1	The contractor shall take the full responsibility of testing and commissioning of the equipment being installed by him under the overall supervision of BHEL. It shall be the responsibility of the contractor to arrange and complete all the testing, pre-commissioning and commissioning activities for the particular equipment as per relevant standard, code of practice, manufacturer's instructions and BHEL norms. All these will be witnessed by BHEL Engineers and reports signed jointly.
4.42.2	All T&P / instruments required for testing are to be arranged by the contractor. Any special equipment, tools and tackles, IMTEs etc. required for the successful completion of the Commissioning Tests shall be provided by the Contractor, free of cost.
4.42.3	All testing activities shall be carried out as per relevant standard, code of practice, manufacturer's instructions and BHEL norms. The contractor shall submit a checklist to BHEL prior to taking up testing and commissioning activities and the activities shall be carried out in accordance with the checklist approved by BHEL. All the above will be witnessed by BHEL engineer and the reports signed jointly.
4.42.4	The commissioning activities, tests, trial runs may have to be repeated till satisfactory results are obtained and also to satisfy the requirements of BHEL / customer / consultant / statutory authorities like boiler inspector, electrical inspector etc.
4.42.5	All the tests at various stages shall be repeated till all the equipment satisfy the requirement of BHEL / Customer. Any rectifications required shall have to be done / redone by the contractor at his cost.
4.42.6	In case, any rework is required because of contractor's faulty erection, which is noticed during pre-commissioning and commissioning, the same has to be rectified by the contractor at his cost. If any equipment / part is required to be inspected during pre-commissioning and commissioning, the contractor will dismantle / open up the equipment / part and reassemble / redo the work without any extra claim.
4.42.7	DELETED
4.42.8	The tests specified above for all the electrical equipment are not exhaustive. Any other pre-commissioning and field tests are necessary as per relevant standards, Electricity rules, code of practice and as instructed by the manufacturer of the equipment shall also have to be carried out if deemed as per requirement either within the quoted rates / price. The contractor shall take the full responsibility of testing, commissioning, trial run and successful operation of the equipment. Test certificates of the vendor scope items, where ever necessary same should be produced by the bidder along with the dispatch documents/ Invoice of the supplied items.

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<b>4.43</b>	<b>OPERATION &amp; MAINTENANCE (O&amp;M)</b>
4.43.1	On successful installation and commissioning of the system (to be certified by BHEL Construction Manager), the contractor shall do the necessary operation and maintenance works of the system for a period of 36 (Thirty-Six) months from the date of start of Operation and Maintenance job. Requirement of number and category of maintenance job person to be decided by BHEL at time to time as per actual site job progress and to be intimated to vendor accordingly. Vendor will arrange for deputing the required maintenance job personnel within seven days from the date of BHEL intimation. Payment shall be made on prorata basis as per actual performance of Man-month duty. All T&Ps and consumables like electrodes, gas, cable dressing materials, HT / LT insulation tapes, tag plates, PVC sleeves for wire marking, fasteners, paints and its consumables required for carrying out the maintenance works of the system shall be arranged by the contractor at their own cost. Replacement of damaged materials if any, if found attributable to contractor, shall be done by the contractor within the quoted price for the materials supplied by them.
4.43.2	The successful prime bidder should possess supervisory licence for 6.6 KV or more graded overhead line and switchgear from appropriate statutory authority.
4.43.3	Operation and maintenance of total construction power network consisting of 6.6 kV ring-main system including 6.6 KV Sub station, Package sub-stations, LT distribution boards (440 V), with all necessary rail poles, wires, insulators, hardware, isolators, circuit breakers, protection system, metering equipment, HT/AB/LT cables, conductors etc., general illumination system during construction, high mast lighting, temporary pole lighting, temporary lights at different floors/ areas till the permanent illumination system is established. For regular day to day as well as breakdown maintenance of the entire system on round the clock basis, necessary provision for experienced supervisor, licensed electrician, helper, T&Ps etc., replacement /rectification of item & components to restore the system for making the system operational is to be made by the contractor within the price quoted by the bidder and accepted by BHEL.
4.43.4	The bidder scope also includes obtaining necessary approvals from statutory authorities.
4.43.5	These services shall be available on round the clock basis. Necessary provision for experienced supervisor, <b>licensed electrician</b> , helper, T&Ps etc. to be made.
4.43.6	During the maintenance period, the contractor shall also provide all necessary spares, fuses, cable gland / lugs, lamps, cables including transformer oil etc. for the system, as required. Payment for the same shall be made on actual basis/OR same shall be supplied by BHEL as free issue item.
4.43.7	During this period, various reports have to be generated and records to be maintained as per the requirements of BHEL. The engineer will specify the formats for these at site.
4.43.8	The contractor shall be responsible for maintenance of electrical installation in BHEL office sheds, site cabins, storage yard, stores sheds (semi closed & closed) & lighting masts and Temporary area Illumination. The nature of works to be carried out will be such as troubleshooting, attending the fault / repairing / replacement of defective parts / devices. BHEL shall provide necessary electrical items/spares free of charge required for this type of maintenance work.
4.43.9	The scope mentioned above is a brief guidance and not exhaustive.
4.43.10	During the maintenance period, BHEL will provide sky lift/ hydraulic platforms with the operator, if required. However fuel shall be arranged by the Contractor on their own Cost.
4.43.11	Any spare parts necessitated due to the contractor's fault shall be supplied or replaced by the contractor at their own cost.
4.43.12	All necessary Hand tools, multi-meters, Megger, earth tester, earthing rods etc. shall be in the contractor's scope. Fire extinguishers supplied under the scope of supply shall be maintained by the contractor till the end of O & M period.

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<b>5.0</b>	<b>SITE VISIT</b>
	Bidder should visit project site and acquire full knowledge and information about site conditions together with all the statutory, obligatory, mandatory requirements of various authorities, before submission of offer. All costs for and associated with site visits shall be borne by the bidder. No claim will be entertained by BHEL on ground of lack of knowledge and the contractor's rates shall be deemed to have taken this into account.
<b>6.0</b>	<b>DEVIATIONS/ CLARIFICATIONS</b>
	Normally no deviation with respect to tender is acceptable to BHEL. However, in case of unavoidable circumstances, the bidder may submit their query for seeking clarifications of BHEL as per modality stipulated in NIT. Any assumptions, presumptions, deviations, etc indicated or implied anywhere by the bidder except those indicated in the deviation schedule/ format will not be recognized and will not form a part of consideration/ offer. In the absence of such filled-up schedule/ format it will be understood and agreed that the bidder's offer is based on strict conformance to the specification and no negotiation would be allowed in this regard. BHEL reserve the right not to recognize any/ all deviations submitted after opening of the bid.
<b>7.0</b>	<b>DEWATERING</b>
	Successful bidder shall ensure at all times that their 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. In case of any deviation from this, BHEL may take appropriate action for setting right and cost including BHEL's overhead will be recovered from successful bidder's bill.
<b>8.0</b>	<b>GENERAL TECHNICAL REQUIREMENTS (CODES AND STANDARDS)</b>
8.1	Except where otherwise specified, the plant/ equipment shall comply with appropriate Indian Standard or an agreed internationally accepted Standard Specification as mentioned elsewhere in tender, each incorporating the latest revisions at the time of tendering. Where no internationally accepted standard is applicable, the bidder shall give all particulars and details as necessary; to enable BHEL to identify all of the plant/ equipment in the same detail as would be possible had there been a standard specification.
8.2	Where the bidder proposes alternative codes or standards they shall include in their offer one copy (in English) of each standard specification to which materials offered shall comply. In such case, the adopted alternative standard shall be equivalent or superior to the standards mentioned in the specification.
8.3	In the event of any conflict between the codes & standards referred above, and requirements of the tender, the requirements which are more stringent shall govern.
8.4	Tools & plants for execution shall not be accepted except with specific approval of Construction Manager, BHEL.
8.5	Wherever specified or required the plant/ equipment shall conform to various statutory regulations such as Indian Boiler Regulation, Indian Electricity Rules, Indian Explosive Act, Factories Act, etc, as applicable for the subject job, obtaining approval for plant/ equipment supplied under the specification from statutory authorities shall be the responsibility of the successful bidder.
<b>9.0</b>	<b>DRAWING AND DOCUMENT</b>
9.1	The location of Sub Station in Plot Plan for reference / appreciation purpose and may get changed depending on project requirement. SLD of Electrical scheme is for general information purpose; vendor shall take reference of this document for preparing the SLD of Electrical scheme and shall get it approved from BHEL for actual execution of job.
9.2	BHEL will provide one set of drawings for the BHEL-supplied equipment on loan to the successful bidder. These drawings must be returned to BHEL at the site after the completion of the work. The personnel of the successful bidder are responsible for taking care of the documents provided to them.
9.3	The successful bidder shall maintain a record of all drawings and documents available

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	with them in a register as per format given by BHEL engineer.
9.4	The data furnished in various annexures enclosed with this tender are only approximate and for guidance. Due to change in design or other reason, variation in quantity and/ or alteration of items may occur for such large scale of work. No claim, whatsoever, will be admissible by BHEL in this regard.
9.5	Should any error or ambiguity be discovered in the specification or information, the successful bidder shall forthwith bring the same to the notice of BHEL before the commencement of work. BHEL's interpretation in such cases shall be final & binding on them.
9.6	Deviation from design dimensions should not exceed permissible limit. The successful bidder shall not correct or alter any dimension details, without specific approval of BHEL.
9.7	The successful bidder has to arrange multiplication of protocols, log sheets and spiral binding of various documents for at least six sets. The number of sets will vary as per the requirement and shall be binding on the successful bidder.
<b>10.0</b>	<b>PROTECTION</b> Bidder shall ensure proper protection of items/ equipments being handled by them. Brief guidelines of protection of various types of items/ equipments, as applicable for the subject job, are furnished below:
10.1	Electrical equipments, controls and insulations shall be protected against moisture and water damages. All external gasket surfaces and flange faces, couplings, rotating equipment shafts, bearings and like items shall be thoroughly cleaned and coated with rust preventive compound and protected with suitable wood, metal or other substantial type covering to ensure their full protection. All exposed threaded parts shall be greased & protected with metallic or other substantial type protector.
10.2	All piping, tubing and conduit connections on equipment and equipment openings shall be closed with rough usage covers or plugs. Female threaded openings shall be closed with rough usage covers or plugs or forged steel plugs. The closures shall be taped to seal the interior of the equipment. Open ends of piping, tubing and conduit shall be sealed and taped.
10.3	All erected equipment/ components to be preserved as per the preservation recommendation of BHEL. For this type of preservation, successful bidder shall engage an exclusive team of persons for meeting the continuous requirement. All other consumables including wire brush, emery papers, painting brush etc to be supplied by the successful bidder within the quoted/ accepted rates.
<b>11.0</b>	<b>GENERAL GUIDELINES FOR FIELD ACTIVITIES</b>
11.1	The successful bidder shall execute the work in a professional manner so as to achieve the target schedule without any sacrifice on quality & maintaining highest standards of safety and cleanliness.
11.2	The successful bidder shall co-operate with BHEL/ owner and other contractors working at site and perform work in a manner so as to minimise interference with other contractor's works. BHEL's engineer shall be notified promptly of any defect in other contractors' works that could affect the successful bidder's work. If rescheduling of successful bidder's work is requested by BHEL/ customer in the interest of overall site activities, the same shall be complied with by the successful bidder. In all cases of controversy, the decision of BHEL shall be final & binding on the successful bidder without any commercial implication.
11.3	BHEL will conduct meetings with the successful bidder along with other agencies at site periodically at a time, place, to be intimated by BHEL at appropriate juncture. The successful bidder shall attend such meetings and take notes of discussions during the meeting and the decisions of BHEL and shall strictly adhere to those decisions in performing work.
11.4	Time is the essence of the contract and the successful bidder shall be responsible for performance of their work in accordance with the specified construction schedule. If at any time, the successful bidder falls behind the schedule, they shall take necessary action to make good of such delays to comply with the schedule and shall communicate such action in writing to BHEL, satisfying that their action will compensate for the delay.

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	No extra compensation for such action is applicable.
11.5	BHEL shall however not be responsible for provision of additional labour and or materials or supply of any other services to the successful bidder except for the co-ordination work between various successful bidders as set out earlier.
11.6	The works under execution shall be open to inspection & supervision by BHEL's/ owner's engineer at all times. The successful bidder shall give reasonable notice to BHEL before covering up or otherwise placing beyond the reach of inspection any work, in order that same may be verified, if so desired by BHEL/ owner.
11.7	Every effort shall be made to maintain the highest quality of workmanship by stringent supervision and inspection at every stage of execution. Manufacturer's instruction manual and guidelines on sequence of erection and precautions shall be strictly followed. Should any error or ambiguity be discovered in such documents the same shall be brought to the notice of BHEL engineer. Manufacturer's interpretation in such cases shall be binding on the successful bidder.
11.8	The successful bidder shall comply with all the rules and regulations of the local authorities, all statutory laws including Minimum Wages, Workmen Compensation, BOCW applicable norms etc. All registration and statutory inspection fees, if any, in respect of the work executed by the successful bidder shall be to their account. He shall obtain labour license and BOCW registration.
<b>12.0</b>	<b>QUALITY CONTROL &amp; QUALITY ASSURANCE</b>
<b>12.1</b>	<b>INSPECTION &amp; FIELD QUALITY ASSURANCE</b>
12.1.1	All equipment supplied shall be brand new, best quality as per specifications laid down by the Indian Electricity Act and Rules.
12.1.2	Preparation of quality assurance log sheets and protocols, testing & calibration records and other quality control and quality assurance documentation as per BHEL engineer's instructions, is within the scope of work / specification. These records shall be submitted to BHEL / customer for approval from time to time.
12.1.3	The protocols between contractor and BHEL shall be made for correctness of 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.
12.1.4	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.
12.1.5	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.
12.1.6	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.
<b>12.2</b>	<b>REQUIREMENT OF ISO 9001</b>
12.2.1	BHEL: PSER is accredited with ISO 9001 certification and as such this work is subject to various audits to meet ISO 9001 requirements.
12.2.2	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

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	quality management system standard.
12.2.3	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 provide all necessary assistance to enable BHEL to carry out such audit & surveillance.
12.2.4	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.
<b>12.3</b>	<b>MMEs / MMRs</b>
12.3.1	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.
12.3.2	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.
12.3.3	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.
12.3.4	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.
12.3.5	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.
<b>12.4</b>	<b>DELETED</b>
<b>12.5</b>	<b>CONFORMANCE TO THE STATUTORY REQUIREMENTS (AS APPLICABLE UNDER THE SCOPE OF THE CONTRACT)</b>
12.5.1	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 compliance with applicable regulations. The work-related statutory inspections, though not limited to, are as under: 1) Electrical Inspector. 2) Factory Inspector, Labour Commissioner, PF Commissioner and other authorities connected to this project work.
12.5.2	Contractor shall arrange A Valid <b>Electrical Contractor's License</b> and A valid Supervisory Competency Certificate for O&M of 6.6 KV or Any HT Power Distribution system of Chattisgarh state from the statutory Authorities of Chattisgarh, at his cost.
12.5.3	The scope includes getting the approvals from the statutory authorities. This includes arranging for inspection visits of electrical inspector periodically as per BHEL Engineer's instructions, submitting documents etc. and following up the matter with them as and when necessary for the work involved in this scope. Statutory Fees paid will be

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	reimbursed on production of evidence.		
<b>12.6</b>	<b>STORAGE &amp; PRESERVATION OF BHEL-ISSUED MATERIAL</b>		
12.6.1	The contractor shall be responsible for storage & preservation BHEL-issued materials as per BHEL Storage & Preservation Guidelines / Instructions.		
<b>12.7</b>	<b>PENALTIES ON VENDORS / SUB-CONTRACTORS AGAINST NON-COMPLIANCE OF QUALITY NORMS</b>		
<b>Sl. No.</b>	<b>Nature of Non-compliance</b>	<b>Penalty for Domestic Project</b>	<b>Remarks</b>
<b>GENERAL</b>			
12.7.1	Unavailability of QAE deployment schedule (duly approved by BHEL Site) matching with manpower requirement of approved L2 schedule	0.10%	Against each RA bill
12.7.2	Unavailability of required number of QAE with proper experience & NDT certification as per the requirement of the Contract	Rs. 1,000.00	Per person per day
12.7.3	Not attending quality meeting of BHEL by nominated member of vendor / sub-contractor	Rs. 2,000.00	Per meeting
<b>CALIBRATION</b>			
12.7.4	Use of MMEs without valid calibration certificate	Rs. 1,000.00	Per equipment per instance
<b>MATERIAL MANAGEMENT</b>			
12.7.5	Non-maintenance of grid pillar marking	Rs. 200.00	Per location week
12.7.6	Mismatch of location of material in store area w.r.t. location mentioned in stock register	Rs. 500.00	Per instance
12.7.7	Non-compliance of Preservation of material as per storage & preservation manuals	Rs. 1,000.00	Per equipment
12.7.8	Not offering received material for verification within stipulated time as per contract	Rs. 500.00	Per instance
<b>PAINTING &amp; ALLIED WORKS</b>			
12.7.9	Not using primer / paints of approved make and as per Specifications	Rs. 1,000.00	Per instance
12.7.10	Painting without proper surface preparation as per approved schedule / drawing / FQP	Rs. 500.00	Per instance
<b>PROTOCOLS &amp; LOG SHEETS</b>			
12.7.11	Delay in preparation of Protocols / Logsheets as per approved FQP within 3 days of completion of checks	Rs. 200.00	Per protocol per day delay
<b>INSPECTION OF BOUGHT-OUT ITEMS / CONSUMABLES</b>			
12.7.12	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	per item per day delay after receipt of material
12.7.13	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	per item per day delay after receipt of material

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**NOTE:**

Any non-conformity requiring dismantling / rework, attributable to vendor / sub-contractor, shall be penalised at a rate mentioned above or cost to BHEL, whichever is higher.

<b>13.0</b>	<b>LABOUR AND LABOUR LAWS</b>
13.1	<p><b>Recruitment of Local Labour</b></p> <p>Local labours shall be engaged for unskilled work. Preference may also be given for appointment of local people in semiskilled and skilled categories, if such suitable persons are available.</p>
13.2	<p><b>Labour Laws and Local Regulations</b></p> <p>The Contractor shall abide by the prevailing labour laws and shall have to obtain labour license from the appropriate authority as per the law at his cost. On obtaining the labour license, the Contractor at appropriate time shall submit certified photocopy of the same to the Purchaser.</p> <p>The Contractor shall possess valid PF &amp; ESI Code.</p>
13.3	<p><b>Wages and Working Hours</b></p> <p>The Contractor shall pay rates of Wages and observe hours and conditions of labour not less favourable than those established for the trade or industry in the district where the work is carried out but not less than the applicable minimum wages or by machinery of negotiation or arbitration to which the parties are organizations of employers and trade union's representatives respectively of substantial proportions of the employers and workers engaged in the trade or industry in the district. In the absence of any rates of Wages, hours or conditions of labour so established the Contractor shall pay rates of wages and observe hours and conditions of labour which are not less favourable than the general levels of wages and hours and conditions observed by other contractor whose general circumstances in the trade or industry in which he is engaged are similar.</p>
13.4	<p><b>Other Requirements</b></p> <p>a) The Contractor shall not, otherwise than in accordance with the Statutes, Ordinances and Government Regulation or Orders for the time being in force, import, sell, give, barter or otherwise dispose of any alcoholic liquor, or drugs, or permit or suffer any such importation, sale, gift, barter or disposal by his sub-contractor(s), agents of employees.</p> <p>b) The Contractor shall not give, barter or otherwise dispose of to any person or persons any arms or ammunition of any kind or permit the same as aforesaid.</p> <p>d) The Contractor shall in all dealings with labour in his employment have a due regard to all recognised festivals, days of rest and religious or other customs.</p> <p>e) In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government, or the local municipal or sanitary authorities for the purpose of dealing with and overcoming the same.</p> <p>f) The Contractor shall at all times take all reasonable precautions to prevent any unlawful riotous or disorderly conduct by or amongst his employees and for the preservation of peace and protection of persons and property in the neighborhood of the Site against the same.</p> <p>g) The Contractor shall be responsible for observance by his sub-contractor(s) of the foregoing provisions.</p>
<b>14.0</b>	<b>DELETED.</b>
<b>15.0</b>	<b>LABOUR AND SUPERVISORY STAFF</b>
15.1	The successful bidder shall engage specially skilled labour, eg sarangs, riggers, etc and khalasis for works under this contract.
15.2	The successful bidder shall provide adequate number of supervisory staffs for carrying out job under this contract. The supervisory staff employed by the successful bidder should be familiar with BHEL material identification pattern. The successful bidder shall ensure proper out turn of work and discipline on the part of labour put on the job by the successful bidder. 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.
15.3	It will be the responsibility of successful bidder to ensure safe lifting of equipment/ material taking due precautions to avoid any accident & damage to other equipment and

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	personnel. They shall be liable for all accidents, damages, etc to personnel and equipment etc. during the execution of the work by the successful bidder.
<b>16.0</b>	<b>HEALTH, SAFETY &amp; ENVIRONMENT</b>
16.1	Refer Document Number: HSEP:14 Rev.: 02, Dec 21, 2022 Document Title: Health, Safety and Environment Plan for Site Operations by Subcontractors. Vendor has to follow HSE norms at project site during execution of entire contract period.
16.2	LOCKOUT TAGOUT is a part of HSE policy and successful bidder has to follow the proper procedure as directed by BHEL engineer during execution of the entire contract period and All activities shall be Recorded and share with BHEL
<b>17.0</b>	<b>DELETED</b>
<b>18.0</b>	<b>DELETED</b>
<b>19.0</b>	<b>STATUTORY INSPECTION</b>
	The scope includes arranging for inspection visits of Electrical Inspector from concerned/applicable govt agencies periodically as per BHEL engineer's instructions, submitting documents, etc and following up the matter with them as and when necessary for the work involved in this scope. Statutory Fees to be paid by the bidder.
<b>20.0</b>	<b>RECONCILIATION OF MATERIALS</b>
20.1	The successful bidder shall submit a reconciliation statement of items received & consumed by them through computerized system.
20.2	At the time of submission of bill, successful bidder shall properly account for material issued to them, if any, as specified herein to the satisfaction of BHEL certifying balance materials are available with successful bidder's custody at site.
<b>21.0</b>	<b>PROGRESS OF WORK</b>
21.1	During the course of work if the progress is found unsatisfactory, or if the target dates fixed from time to time 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 successful bidder's bills, all charges incurred on this account including all expenses together with BHEL overheads.
21.2	The successful bidder shall submit monthly progress reports as per the format, to be provided by BHEL during execution, together with requisite no of photographs (soft copy), as detailed elsewhere, to Construction Manager, BHEL, with a copy to Project Manager at BHEL/ PSER/ Kolkata. Manpower reports, material reports, consumables reports, and other reports considered necessary by BHEL will also have to be submitted with a copy to Project Manager at BHEL/ PSER/ Kolkata.
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.
21.6	Successful bidder shall arrange for periodic 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 successful bidder for discussions. Successful bidder shall constantly update/ revise works programme too meet the overall requirement.
21.7	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) or otherwise as to be specified by BHEL.
<b>22.0</b>	<b>LAND</b>
22.1	Availability of land within plant boundary is very limited and the contractor has to plan and 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 erection agencies. Land will be allocated with certain time frame and to the extent available/ considered necessary, and will be reviewed by BHEL depending upon the area availability. 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	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

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	obtaining approval of formalities from statutory body. Further, contractor must ensure minimum HSE norms and hygienic sanitary conditions in his labour colony.
22.3	The contractor shall provide minimum 1 no overhead water tank with minimum 10 nos. tap in their labour colony for drinking/washing etc purpose. One no cemented area of suitable width, length, with tap (s) for washing purpose etc. also to be provided.
22.4	The contractor will be responsible for handing back all lands, as handed over to him by BHEL/ BCGCL.
<b>23.0</b>	<b>WATER, POWER &amp; OTHER FACILITIES</b>
23.1	Contractor has to make his own arrangement for water and power supply, as shall be required to carry out the entire scope of work under this tender specification at his own cost. BHEL shall not be responsible, for providing any source of water or power to the contractor. The contractor may have to carry out the jobs even during the night. Hence all necessary arrangements may be deployed to ensure 24 hours working to ensure timely completion of the job.
23.2	All resources including T&P, manpower, consumables etc. required for carry out the execution of job are to be arranged by the contractor within the quoted / accepted rates.
23.3	Contractor has to make his own arrangement at his cost for completing the formalities with the all authorities / customer, if required, for bringing their material, plant, equipment at site for execution of the work.
23.4	Contractor has to make his own arrangement for accommodation, transportation & other facilities of their workmen/ employees at their own cost. Contractor has to make his own arrangement for computer facilities (including stationary), to carry out their portion of work and for preparation of reports etc., at their own cost. Providing watch & ward for security and safety of their scope of materials will be the responsibility of contractor at their cost. BHEL may call for weekly/ monthly meeting for reviewing the progress of the work and the contractor will comply with it.
<b>24.0</b>	<b>DELETED</b>
<b>25.0</b>	<b>PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT</b>
	To meet the need of construction management at site, successful bidder shall provide the following services within quoted/ accepted rates.
25.1	<b>PLANNING &amp; MONITORING</b>
25.1.1	Upon receipt of order/ LOI from BHEL, successful bidder shall interact with BHEL site for kick-off meeting to discuss & firm up item-wise/ activity-wise schedule of erection, testing, commissioning so as to complete the entire job within the stipulated completion period, matching with project schedule.
25.1.2	Based on the discussion of the kick-off meeting or otherwise, a master schedule shall be drawn, which shall be subject to acceptance/ approval of BHEL.
25.1.3	On every month, the successful bidder shall submit to Construction Manager, BHEL schedule-wise plan vs actual status of erection, testing, commissioning, along with action plan to make-up delay, if any.
25.1.4	The project schedule might undergo revision/ modification periodically, for which the successful bidder may have to prepare/ modify schedule periodically in consultation with BHEL, so as to match with revised project milestones.
25.1.5	The successful bidder shall ensure monitoring of these activities at least on fortnight basis or at other frequency as mutually agreed with BHEL.
25.1.6	Successful bidder shall submit daily work program based on above schedule. Deferment of above schedule is not acceptable. Successful bidder will adhere to schedule & augment resources to ensure completion as per schedule.
25.1.7	Progress reviews on entire activities will be held periodically as per direction of BHEL, at site/ Kolkata. These meetings will be used as a forum for discussing all areas where progress needs to be expedited. The successful bidder shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.
25.1.8	Successful bidder shall prepare progress report indicating progress on key activities, management summary for critical activities, list of actions requires BHEL's attention. The schedule shall preferably be made in Primavera/ MS Projects, so that the same is compatible with BHEL's project management software.

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25.2	<b>PROGRESS REPORTING</b>	
25.2.1	Successful bidder shall submit periodic monthly progress reports for work force, material, consumable and other reports as per pro-forma considered necessary by BHEL. In case of any failure on successful bidder's part to comply with this, BHEL may at their discretion, may deduct suitable amount from their RA bills or stop work or terminate contract.	
25.2.2	The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which the successful bidder intends to take to make good the slippage or lost time, so that further works again proceed as per the original program and slippages do not accumulate and effect the overall program.	
25.2.3	The daily work force reports shall clearly indicate work force deployed, category-wise specifying also the activities in which they are engaged.	
25.2.4	Weekly progress review meetings will be held at site during which actual progress during the week vis-à-vis scheduled program shall be discussed or actions to be taken for achieving targets. For discussions, the successful bidder shall present program of subsequent week. The successful bidder shall constantly update/revise his work program to meet the overall requirement.	
25.2.5	Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of bidder will be held once in a month at Calcutta/ site. These meetings will be attended by reasonably higher officials of the successful bidder and will be used as a forum for discussing all areas where progress needs to be speeded up. The successful bidder shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.	
25.3	<b>SITE ORGANIZATION</b>	
25.3.1	The successful bidder shall maintain a site organization of adequate strength in respect of manpower, construction machinery and other implements at all time for smooth execution of the contract headed by a competent Site Incharge for site operations with sufficient level of authority to take site decisions. The successful bidder will submit organization chart (showing the name of Site Incharge) with individual bio-data indicating various levels of experts to be posted for supervision in the fields of supervision and execution, quality, material management, planning, safety, etc. The organization shall be reinforced from time to time, as required to make up slippage (if any) from schedule without any commercial implication to BHEL. The organization chart is to be submitted within 10 days from the date of LOI.	
25.3.2	The Site Incharge once approved and posted at site, should not be changed throughout the contract period, without written permission from BHEL.	
25.3.3	Following (minimum) manpower with power plant construction power background to be deployed at site by the successful bidders for their day to day supervision, etc for execution of the scope as per the stipulated deployment plan or otherwise agreed with Construction Manager, BHEL, in writing.	
25.3.3.1	Site Incharge: Minimum diploma holder / graduate with at least 10 years of experience in electrical construction work.	Within 15 days from start of work
25.3.3.2	Site supervisor for Electrical work execution: Minimum diploma holder/ graduate with at least 3 years of experience in electrical construction work.	1 (One) no within 7 days from start of work.
25.3.3.3	Electrician (Skilled, semi-skilled).	Number and deployment shall be as per direction of BHEL
25.3.3.4	Deleted	
25.3.4	Engineer/ supervisor for other functions like store/ purchase, material management, planning, FIN, administration, etc are to be provided as per site requirement.	
25.3.5	Further induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement and shall be deployed by successful bidder within the accepted rates.	
25.3.6	Apart from the qualified and competent Site-in-charge, qualified safety officer (exclusively for safety supervision jobs) shall be deployed at site throughout the	

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	execution period. Qualification and experiences of Safety officer will be as per specific requirement indicated in the HSE Plan for Sub contractor as provided in the Tender.
25.3.7	In the event of non-deputation of engineer/ supervisor during Erection & commissioning period by the bidder as per above agreed schedule, BHEL shall reserve the right to deduct Rs. 50,000/- per month for engineer, Rs. 40,000/- per month for the supervisor / safety officer from RA bills. Further induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement without any financial implication.
25.3.8	BHEL reserve the right to reject or approve the list of personnel proposed by the successful bidder. The persons whose bio-data have been approved by BHEL will have to be posted at site and deviation in this regard will not be permitted unless specific & reasonable justification is made.
25.3.9	<b>FUNCTIONING OF OPERATION &amp; MAINTENANCE (O&amp;M)</b>
25.3.9.1	During O&M of construction power network system service, successful bidder shall deploy following minimum resources. The construction power network will be in operation continuously, for which the successful bidder may have to deploy requisite manpower, tools & plants, consumables, etc in 3 shifts. <b>The manpower should be available throughout the year inclusive of all holidays and Sundays.</b>
25.3.9.1.1	1 no Highly skilled Supervisor (With relevant experience) for day shift.
25.3.9.1.2	2 no Skilled electrician (With relevant experience) for each of Shift -A and Shift-B. 1no Skilled electrician (With relevant experience) for Shift-C only (Night Shift). Payment shall be release as per BOQ item rate & terms mentioned elsewhere in the tender.
25.3.9.1.3	2 no Electrical helper/ Semi skilled Manpower for each of Shift -A and Shift-B. 1no Electrical helper/ Semi skilled Manpower for Shift-C only (Night Shift). Payment shall be release as per BOQ item rate & terms mentioned elsewhere in the tender
25.3.9.1.4	Requisite tools & plants, consumables.
25.3.9.2	In the event of failure of the successful bidder to provide any of the aforesaid manpower for a period of 1 day, if BHEL deploys the necessary manpower to fulfil the project requirements then recovery will be made based on the actual cost incurred, including applicable BHEL's overhead.
25.3.9.3	<p>The contractor shall strictly comply with the provisions of the Employee Provident Fund Act, 1952 (viz EPF@12% &amp; EDLI@0.5%) and the provisions of the Employees' State Insurance Act (viz ESI@3.25% ) and also in the provision of Labour law viz Minimum Wages, Bonus@8.33%, Retrenchment benefits@4.81%. If ESI scheme is not available then a suitable workman compensation policy must be taken by the bidder. The bidder should provide uniform and safety Gear viz Shirt, Pant, Safety Vest, Cap, Sweater/Jerkin, Shoe, Raincoat etc to the deployed personnel.</p> <p>In case this office receives any complaint regarding non-payment of wages/benefits to any personnel the amount payable to these personnel will be recovered from the contractor's bill and paid to such personnel.</p> <p>The bidder shall refer to the minimum wage circular of the Ministry of Labour and Employment, New Delhi, Government of India.The successful bidder will implement changes in minimum wages and benefits as per the notifications issued by the Government of India</p>
25.3.9.4	Deleted
25.3.9.5	BHEL reserves the right to provide/ deploy requisite T&P, consumables and associated costs, along with a 5% overhead, which will be deducted from the successful bidder's payments iif not provided by the vendor as per requirements.
25.4	The successful bidder should also submit to BHEL for approval a list of T&Ps along with their fitness certificates. The tools & tackles shall not be removed from site without written permission of BHEL.
<b>26.0</b>	<b>CONSUMABLES</b>
26.1	The successful bidder shall provide, within accepted rates/ price, all consumables as necessary for the work. A list of tentative consumables required for the subject job is

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	furnished in relevant annexure of the tender.
26.2	It shall be the responsibility of the successful bidder to plan activities and store sufficient amount of consumables. Non-availability of any specified consumable or equivalent suggested by BHEL can not be considered as reason for not attaining the required progress or for additional claim.
26.3	BHEL reserves the right to reject use of any consumable, if it is not found to be of required standard/ make, purity.
26.4	It shall be the responsibility of the successful bidder to obtain prior approval of BHEL regarding suppliers, type, etc, before procurement.
26.5	BHEL reserves the right to reject the use of any consumable at any stage, due to bad quality, improper storage, date of expiry. It shall be the responsibility of the successful bidder to replace the same at their cost without loss of time.
26.6	In case of improper arrangement for procurement of any consumables, BHEL reserves the right to procure the same from any source and recover the cost from the successful bidder's first subsequent bill at market value plus the departmental charges of BHEL from time to time (5% at present).
<b>27.0</b>	<b>MMD</b>
27.1	The successful bidder shall ensure deployment of reliable & calibrated measuring and monitoring devices (MMD). The MMDs shall have test calibration certificate from authorized/ Govt approved agencies. The successful bidder shall also keep provision of alternate engagement for such MMDs so that the work does not suffer when a particular IMTE is sent for calibration. Re-testing/ re-calibration shall also be arranged by the successful bidder at their own cost at regular interval during the period of use as advised by BHEL.
27.2	In the event of failure of successful bidder to bring necessary and sufficient MMDs, BHEL may arrange for the same at the risk & cost of the successful bidder. The entire cost towards this along-with overhead shall be paid by the successful bidder or deducted from the successful bidder's bills.
27.3	List of tentative MMD required for the job is furnished in relevant annexure of the tender, for guidance purpose.
<b>28.0</b>	<b>TOOLS &amp; PLANTS, MMD TO BE PROVIDED BY SUCCESSFUL BIDDER</b>
28.1	T&P as per relevant annexure of this volume of tender shall be provided by successful bidder, if applicable for this job and as specified in this volume of tender.
28.2	It may be noted that the list is not exhaustive and is only for general guidance. The successful bidder is required to provide all necessary T&P (other than those specified to be provided by BHEL, af any) 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 successful bidder may have to deploy additional T&P. Quoted/ accepted rate shall be inclusive of such requirements.
28.3	In the event of any failure of the part of successful bidder, BHEL may at their discretion also terminate the contract on this ground and take out any or whole amount of the contract from the scope of successful bidder. In the event of failure of successful bidder to deploy necessary and sufficient T&P/ MMDs, BHEL will be at liberty to arrange the same at the risk & cost of successful bidder including transportation cost of same from any of BHEL site/ other agency & charges as applicable shall be deducted from RA bill of successful bidder. Decision of BHEL in this regard will be final & binding on successful bidder.
28.4	T&Ps shown in the relevant annexure are minimum requirement. Further requirement will be reviewed time to time at site and vendor will provide additional T&P/ equipments to ensure completion of entire work within schedule time without any financial implication to BHEL. Successful bidder will give advance intimation & certification regarding capacity etc prior to dispatch of heavy equipment.
28.5	In case of non-deployment within the period indicated, BHEL reserves the right to arrange the same at the risk & cost of successful bidder or suitable recoveries will be made from RA bills at site.
28.6	In case of Crane/ other T&P deployment, as of the crane/Other T&P must be less than 15 years during execution period.

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<b>29.0</b>	<b>TOOLS &amp; PLANTS TO BE PROVIDED BY BHEL ON SHARING BASIS</b>
29.1	No T&P will be provided by BHEL to the successful bidder during the entire contract period of Package -A including extended period, if any, <b>except 1 no. of hydra for cable, T&amp;P transportation subject to availability at the time of O&amp;M period.</b>
29.2	BHEL will facilitate the use of the Man Lifter/Sky Lifter during the Operations and Maintenance period as required. However, the bidder shall be responsible for supplying the fuel for the Man Lifter/Sky Lifter.
<b>30.0</b>	<b>TEST CERTIFICATE FOR T&amp;P</b>
30.1	All T&P including measuring (calibrated) instruments, lifting tackles & pulling devices, wire rope, slings to be deployed by the successful bidder must bear valid/ latest test certificates for their suitability, and the documents shall be preserved at site.
30.2	In case of expiry of validity of any such test certificate during construction, the successful bidder shall arrange for revalidation of the same well in advance, so that the construction activities do not suffer on account of non-availability of such test certificates.
30.3	The successful bidder should also submit to BHEL for approval a list of T&Ps along with their fitness certificates. The tools & tackles shall not be removed from site without written permission of BHEL.
<b>31.0</b>	<b>RECONCILIATION OF BHEL ISSUED MATERIALS</b>
31.1	The successful bidder shall submit a reconciliation statement of materials issued to them, if any, in every month. The same may be submitted along with RA bill.
31.2	Successful bidder shall properly account for the material issued to them as specified herein to the satisfaction of BHEL certifying that the balance material are available with their custody at site.
<b>32.0</b>	<b>DELETED</b>
<b>33.0</b>	<b>MATERIAL DESPATCH CLEARANCE CERIFICATE (MDCC)</b>
33.1	MDCC shall be issued by BHEL/ owner or their authorized representative prior to dispatch. In case the tests are not witnessed by BHEL, the test certificates shall be submitted to BHEL and MDCC will be issued thereafter.
33.2	Copy of MDCC and other dispatch document shall accompany with every dispatch, failing which the consignment shall not be allowed to enter the project premises.
33.3	Bidder should issue intimation letter to the agency before despatch of materails and copy of same will be given to BHEL for intimation.
<b>34.0</b>	<b>MATERIAL RECEIPT CERTIFICATE (MRC)</b>
	MRC shall be issued by BHEL after the material is received at site in good condition.
<b>35.0</b>	<b>DESPATCH</b>
35.1	All materials/ plants/ equipments shall be transported by road including ODC consignment. Despatch shall only be made after inspection and issue of MDCC by BHEL. Advance information by fax/ courier/email of despatch details shall be sent to Construction Manager, BHEL.
35.2	No consignment shall be dispatched on SELF basis. Material shall be despatched prepaid, door delivery basis, else ensure the clearance and collection of goods from lorry godown and arrangement to transport the same to Site store shall be in the scope of vendor.
35.3	Each package should carry the packing slip/ details of contents and should be put inside a metal enclosure, properly fixed to the packing from outside. The packing shall be such as to ensure prevention of damage, corrosion, pilferage, deterioration, loss in transit or storage and road-worthy.
35.4	The title of the ownership of goods to be supplied shall pass on to BHEL on dispatch ex works/ FOR destination. However, till the scope is completed in all respect and the plant/ equipment is taken over by the owner the goods shall remain with the custody of the bidder.
<b>36.0</b>	<b>DELETED</b>
<b>37.0</b>	<b>DELETED</b>
<b>38.0</b>	<b>PAYING AUTHORITY</b>
38.1	All issues related to invoicing, payment shall be addressed to following
38.2	Project Director, BHEL Site Office, BCGCL, LAKHANPUR

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	Any change of above shall be intimated to the vendor accordingly.
<b>39.0</b>	<b>APPROVED MANUFACTURER/ SUB-VENDOR</b>
	For bought out items, successful bidder have to adhere to the list of sub-vendors, indicated in the tender. For items not covered under this list or for alternate vendor, successful bidder shall put up requests to BHEL, along with relevant credentials of proposed vendor, for acceptance of BHEL.
<b>40.0</b>	<b>INSPECTION &amp; JOINT VERIFICATION (AT VENDOR'S WORKS)</b>
	Prior to dispatch, the materials would be offered by the successful bidder for joint inspection at the vendor's works with advance notice for inspection call to BHEL. However, inspection is not mandatory for all items, the test certificates shall be submitted to BHEL and clearance will be issued thereafter.
<b>41.0</b>	<b>INSPECTION &amp; JOINT VERIFICATION (AT SITE)</b>
	The vendor shall be intimated within 7 days from the date of receipt of each consignment at site to depute their representative for joint inspection and verification of the equipment/ materials received at site. The vendor shall depute their representative within 7 days from receipt of such intimation failing which BHEL shall proceed with the inspection and verification of equipment/materials and BHEL's decision in this regard shall be final and binding to the vendor.
<b>42.0</b>	<b>COMPLETION PERIOD</b>
<b>42.1</b>	<b>Package-A [SUPPLY PART (SCH-3, VOL-III) &amp; SERVICE PART (SCH-4, VOL-III)]</b>
42.1.1	Entire work under the scope shall be successfully completed in all respect within 6 (six) months from the date of start of work, as certified by Construction Manager, BHEL.
42.1.2	The successful bidder shall start supply of items within the specified days as to be jointly agreed with Construction Manager, BHEL. The successful bidder shall supply each item on written clearance from Construction Manager, BHEL.
42.1.3	The successful bidder has to mobilize and commence the work within 10 (Ten) days, from the date of intimation by BHEL. The exact date of start of work shall be reckoned based on certificate of Construction Manager, BHEL.
42.1.4	During the entire period of contract, successful bidder shall maintain proper progress, adequate manpower, requisite handling and transportation equipments (for BHEL supplied and self supplied materials), tools & tackles and other consumables, etc to meet the schedule programme as per the priority given by BHEL engineer.
<b>42.2</b>	<b>Package -B (OPERATION &amp; MAINTENANCE PART (SCH-5, VOL-III))</b>
42.2.1	The successful bidder shall provide complete service of operation & maintenance (O&M) of the system 36 months from charging and handover of 1st PSS, which is to be certified by Construction Manager, BHEL.
42.2.2	The bidder shall hand over the system in phases (part by part) after commissioning for operation and maintenance (O&M). Before handing over any part of the system, the maintenance of the remaining portion will be included in the service scope.
42.2.3	Successful bidder, within reasonable time but before commencement of O&M service, shall discuss & submit to BHEL program of O&M indicating deployment pattern of various resources, not less than the pattern stipulated in the tender, and obtain approval of BHEL.
<b>43.0</b>	<b>SUPPLY, SERVICE, O&amp;M SCHEDULE</b>
43.1	Upon receipt of order/ LOI from BHEL, successful bidder shall interact with BHEL site for kick-off meeting to discuss & firm up item-wise/ activity-wise schedule of supply & service scope so as to complete the entire job within the stipulated completion period, matching with project requirement.
43.2	Successful bidder shall obtain prior approval of BHEL for 'equivalent' make of any item and obtain BHEL's clearance in writing before procurement & supply of items to site. For this, successful bidder, within 20 days from date of LOI, shall carry out site survey to work out quantities of various items, specially which are site layout oriented and submit the list along with proposed suppliers (For supply) to BHEL for acceptance. However, this list might undergo revision due to change in layout or some other ground to meet the project requirement and successful bidder shall comply with this modification together with revision in quantities to complete the job.

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43.3	On every month, the successful bidder shall submit to Construction Manager, BHEL schedule-wise plan vs actual status of erection, testing, commissioning, along with action plan to make-up delay, if any.
<b>44.0</b>	<b>CERTIFICATE TOWARDS COMPLETION</b>
	The work under the scope of the successful bidder shall be deemed to have been completed in all respects only when so certified by BHEL/ owner. The decision of BHEL in this regard shall be final and binding on the successful bidder.
<b>45.0</b>	<b>EXTENSION OF TIME FOR COMPLETION</b>
45.1	Shall be carried out as per Clause 2.11 of GCC.
<b>46.0</b>	<b>SECURED RECOVERABLE ADVANCES</b>
	Not applicable for this tender.
<b>47.0</b>	<b>OVER RUN CHARGES</b>
	Not applicable for this tender.
<b>48.0</b>	<b>REVISION ON ACCEPTED CONTRACT RATE</b>
48.1	Not applicable in this tender for supply and service part of the scope.
48.2	For O&M part, following terms shall be applicable.
48.2.1	After completion of construction power network including handing over to BHEL, if any alteration/ modification to construction power network is necessitated, the successful bidder shall carry out the same, as per terms of tender and as per following rates.
48.2.1.1	For the service/work which involves dismantling of installed system or major modification in construction network, the same shall be considered as Extra Works and be governed by Clause no 2.15 of GCC-Volume-IB, by the successful bidder throughout the O&M period, including extension, if any. PVC will not be applicable for such works. .
48.2.1.2	If such work involves supply of items covered in SCH-3 of Volume-III within 02 (two) year from start of Package-B, the contract rate for respective supply items as per SCH-3 shall be applicable for this work.
48.2.1.3	If such work involves supply of items covered in SCH-3 of Volume-III beyond 02 (two) years from start of Package -B, the contract rate for respective supply items as per SCH-3 shall be revised by 10 %.This shall be applicable for extended O & M contract part also,if any.
<b>49.0</b>	<b>PRICE VARIATION CLAUSE/ ESCALATION</b>
49.1	PVC is Not applicable for <b>Package-A</b> of this tender.
49.2	PVC clause no 2.17 of standard GCC shall be applicable for <b>Package-B</b> and Payment/recovery due to variation in Index for Labour, Average Minimum Wages for Labour, and Index for High Speed Diesel Oil, shall be determined by price variation formula as described in GCC.
<b>50.0</b>	<b>EXTRA/ ADDITIONAL ITEMS OF WORK</b>
50.1	Extra/ additional work for all items/ systems shall be as per GCC.
50.2	No PVC, rate revision, over run charge/ compensation is applicable for extra works.
50.3	In the event of any dispute regarding acceptance of any work as "EXTRA", the work has to be carried out by keeping man-hour and consumables record jointly signed with remark "for EHQ decision". Under no circumstances, the successful bidder can refuse to carry out such work with pre-condition, save and except of keeping daily record of category of man-hours and consumables spent for the particular job for further consideration by EHQ at Kolkata.
<b>51.0</b>	<b>SECURITY DEPOSIT &amp; PERFORMANCE BOND</b>
51.1	Security deposit shall be applicable as per relevant clause of GCC.
51.2	Performance bond is not applicable for this tender.
<b>52.0</b>	<b>TAXES, DUTIES ETC</b>
52.1	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/

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	accepted rates/ price shall be inclusive of all such requirements.
52.2	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.
52.3	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.
52.4	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.
52.5	TDS under Income Tax shall be deducted at prevailing IT rules from the bills.
52.6	TDS under GST shall be deducted as per prevailing GST rules from the bills.
52.7.1	You may collect TCS under section 206C(1H) of Income Tax Act, 1961 if applicable.
52.7.2	In case, you collect TCS under section 206C(1H) of Income Tax Act, 1961, following compliance is required.
52.7.2.1	TAN and PAN of vendor should appear in all invoices/claims. Copy of TAN /TCS registration is to be submitted.
52.7.2.2	Amount of TCS and Assessable value on which TCS has been calculated should be specified clearly in the invoice.
52.7.2.3	You shall be required to submit certificate of TCS in Form no. 27D within 15 days from the due date for furnishing the statement of tax collected at the source.
52.7.3	In case, you do not collect TCS under section 206C(1H) of Income Tax Act, 1961, following declaration is to be submitted along with each invoice: -  "I/We hereby declare that I/We are not required to collect TCS under section 206C(1H) of Income Tax Act, 1961, on this bill.
52.7.4	In event of failure to comply with the provisions of the Act, or proper certificate not issued, or if tax collected but not remitted to the Government, or for any other reason and thereby causing loss to BHEL, the same shall be recoverable from the vendor with applicable interest.
52.7.5	You shall comply with all statutory amendment/notifications in this respect.
52.8	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: As per attached GSTN Code table. Name: Bharat Heavy Electricals Ltd. Address: Bharat Heavy Electricals Limited Power Sector Eastern Region BCGCL'S COAL TO AMMONIUM NITRATE PROJECT OFFICE BANDABAHAL, OLD PO BELPAHAR, BIT COLONY-MCL LAKHANPUR DISTRICT-JHARSUGUDA ODISSA PIN CODE-768211 Specific details of BHEL GSTN, Name and Address as stated above, have been specified elsewhere in the tender.
52.9	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- Bharat Heavy Electricals Limited

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	<p>Power Sector Eastern Region BCGCL'S COAL TO AMMONIUM NITRATE PROJECT OFFICE BANDABAHAL, OLD PO BELPAHAR, BIT COLONY-MCL LAKHANPUR DISTRICT-JHARSUGUDA ODISSA PIN CODE-768211 and Email address – Shall be intimated later.</p> <p>Specific details of above shall be notified by BHEL at appropriate juncture.</p>
52.10	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.
52.11	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.
52.12	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.
52.13	Bidder shall note that in case GST credit is delayed/ denied to BHEL due to delayed/ nonreceipt 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.
52.14	<p>Successful bidder shall upload the invoices raised on BHEL in IFF/GSTR-1 within the prescribed time as given in the GST Act and the same should be available to BHEL in FORM GSTR-2B electronically through the common portal; and confirmation of payment of such GST to the Government through filing of GSTR-3B of corresponding month/quarter.</p> <p>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.</p>
52.15	<p>Successful bidder to arrange for e-waybill for any movement of goods for the execution of the contract.</p> <p>Successful bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants &amp; machinery at site for execution of the works under this contract, Road Permit/ Way Bill, if required, shall be arranged by successful bidder and BHEL will not supply any Road Permit/ Way Bill for this purpose.</p>
52.16	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.
52.17	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.
<b>53.0</b>	<b>TERMS OF PAYMENT</b>
53.1	The successful bidder shall submit their running bill (RA bill) once in a month, at the end of the month, as per billing schedule of this tender.
53.2	Progressive payment shall be made by BHEL against successful bidder's RA bill, complete & correct in all respects accompanied by BHEL engineer's certified/ measurement sheet, jointly signed; requisite statutory certificates, certified by BHEL; within 30 days of submission of the bill.
53.3	However, no extra payment shall be made in the event of deferment in payment.

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53.4	<b>FOR Package-A (SCH-3 &amp; SCH-4, VOLUME-III)</b>
53.4.1	<p>For all items of work as per Volume-III, Price Schedule, interim payment shall be limited to 95 % of the gross value of interim bill on item rate basis. The balance 5 % shall be retained from each Running Bill admitted.</p> <p>Alternatively, BG, in line with clause 1.12 of GCC, equivalent to 5% of Contract Value against Retention Amount can also be submitted before payment of first RA Bill. The validity of the said BG shall be initially for the contract period &amp; shall be extended, if so required, up to acceptance of final bill. In case of increase in contract value, additional BG for 5% of differential amount shall be submitted by Contractor before payment of next RA Bill due. In case, contractor opts cash deduction from RA bills in the beginning &amp; subsequently offers to submit BG later on, then refund of deducted retention amount may be permitted against submission of equivalent BG only once during the contract period.</p> <p>Retention Amount shall be refunded on completion of the guarantee period, as well as fulfilment of clause no 2.22.2 of GCC along with confirmation of receipts of TCS certificates from vendor, as applicable and confirmation of full GST Credit to BHEL. Any interest if levied thereon for reasons elaborated in taxes, duties clause of the tender, which is not attributable to BHEL, will be recovered from the final payment/ retention amount/ securities.</p>
53.4.2	All admissible recovery / adjustments etc. shall be made from the interim payable amount
53.4.3	Out of 95 % of above payment, 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.
53.4.3.1	0.7 % shall be paid on compliance of house keeping of vendor's working area and store/ office areas.
53.4.3.2	0.3 % shall be paid on compliance of general illumination of vendor's working area and stores, office area.
53.4.3.3	0.2 % shall be paid on compliance of applicable OHSMS requirement as per guidelines of BHEL/ PSER and as specified in the tender.
53.4.3.4	0.3 % shall be paid on compliance of applicable safety requirement as per guidelines of BHEL/ PSER and as specified in the tender.
53.4.3.5	BHEL site at its discretion may further split up the above percentages of break up and effect payment to suit the site condition, cash flow requirement, according to the progress of work.
53.5	<b>FOR Package-B (SCH-5, VOLUME-III)</b>
53.5.1	The job will be measured in terms of man-day. MAN-DAY is defined as 'An industrial unit of production equal to the work one person can produce in a day'. A certificate from the Engineer/ Engineer In-charge concerned should be obtained for job measurement for the purpose of release of payment. Payment will be made on monthly basis on submission of bills.
53.5.2	Man-day" under this contract shall mean eight-hour duty on any shift (General-Shift, A-Shift, B-Shift, C-Shift) on any day.
53.5.3	Payment will be made per man-month according to the bidder's quoted rate. The bidder has to submit the proof of compliance all statutory requirements outlined Clause no-.25.3.9.3 along with RA bill. Applicable GST will be payable in accordance with clause no. 52.0 specified above.
53.5.4	For all items of work as per the break-up, 100% payment will be released on submission of the bill and supporting documents.
53.5.5	Deleted
53.6	All admissible recovery/adjustments etc. shall be made from the interim payable amount.
53.7	Out of 100 % of above payment, 1.5 % of gross bill amount shall be paid in the following

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	manner on certification by BHEL engineer after compliance of each of following activities 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	
53.7.1	0.7 % shall be paid on compliance of house keeping of vendor's working area and store/ office areas.	
53.7.2	0.3 % shall be paid on compliance of general illumination of vendor's working area and stores, office area.	
53.7.3	0.2 % shall be paid on compliance of applicable OHSMS requirement as per guidelines of BHEL/ PSER and as specified in the tender.	
53.7.4	0.3 % shall be paid on compliance of applicable safety requirement as per guidelines of BHEL/ PSER and as specified in the tender.	
53.8	BHEL site at its discretion may further split up the above percentages of break up and effect payment to suit the site condition, cash flow requirement, according to the progress of work.	
53.9	<b>Applicable GST shall be released to you upon compliance with the following conditions:</b>	
53.9.1	The goods or services covered under the invoice must be received in full, along with the corresponding valid tax invoice by BHEL.	
53.9.2	Following GST compliances must be ensured within the timelines prescribed for availing Input Tax Credit (ITC) under GST law:	
53.9.3	You declaring such invoice in FORM GSTR-1, and it being auto-populated into FORM GSTR-2B of BHEL through the common portal.	
53.9.4	Confirmation of GST payment by you to the government, verified through the filing of your FORM GSTR-3B for the corresponding month or quarter.	
53.9.5	Notwithstanding anything contained above, GST amount may be released along with the payment against Tax Invoice, provided:	
53.9.6	Exposure of BHEL against such GST amount is sufficiently covered by the security deposit / Bank Guarantee / any other amount due to the vendor/contractor at the time of releasing such GST payment.	
53.9.7	Such relaxation to be allowed till the subsequent month i.e. till the GST compliances are done by the vendor / contractor against the given Tax Invoice.	
53.9.8	As long as the GST compliances are ensured on the part of the vendor / contractor, this practice of releasing GST payment may be continued.	
<b>53.10</b>	<b>BILLING BREAK-UP</b>	
	<b>Activity / Work Description</b>	<b>% of unit rate</b>
<b>53.10.1</b>	<b>SUPPLY PART (SCH-3)</b>	
<b>53.10.1.1</b>	<b>Preparation of drawings and obtaining statutory clearances etc. (BOQ ref 1)</b>	
<b>53.10.1.1.1</b>	On completion of route survey and preparation of drawings.	50%
<b>53.10.1.1.2</b>	On getting charging clearance from Statutory Authority.	50%
<b>53.10.1.2</b>	<b>Supply of Materials (BOQ ref 2, 3, 4 &amp; 5 ,6)</b>	
<b>53.10.1.2.1</b>	On receipt of material, verification of documents and on acceptance at site.	90%
<b>53.10.1.2.2</b>	On charging of material OR final bill of Package-A.	10%
<b>53.10.2</b>	<b>SERVICE PART (E&amp;C) (SCH-4)</b>	
<b>53.10.2.1</b>	<b>Laying of HT / LT cable (BOQ Ref 2.18,2.19 ,3.1 to 3.6)</b>	
<b>53.10.2.1.1</b>	On laying of cable.	45%
<b>53.10.2.1.2</b>	Termination of cables with respective equipment.	25%
<b>53.10.2.1.3</b>	On Charging.	30%
<b>53.10.2.2</b>	<b>Laying of 6.6KV O/H line (BOQ Ref 2.1)</b>	
<b>53.10.2.2.1</b>	On completion of line stringing	45%
<b>53.10.2.2.2</b>	On completion of end connection	25%
<b>53.10.2.2.3</b>	On Charging	30%
<b>53.10.2.3</b>	<b>Erection and Commissioning of PSS &amp; Main 6.6KV substation (BOQ Ref 1.12,1.15,2.20)</b>	
<b>53.10.2.3.1</b>	Placement of transformer/ PSS& RMU /Desk/Control Panel	35%

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<b>53.10.2.3.2</b>	Termination of cables and earthing of equipments etc.	20%
<b>53.10.2.3.3</b>	Completion of Fencing, substation flooring, lighting and lightning poles erection etc., as applicable for each substation	20%
<b>53.10.2.3.4</b>	Testing, Commissioning and charging of each substation	25%
<b>53.10.2.4</b>	<b>Erection and testing of Distribution Boards (BOQ Ref 1.13,3.21,4.5)</b>	
<b>53.10.2.4.1</b>	On erection of Distribution boards	70%
<b>53.10.2.4.2</b>	On charging of Distribution boards	30%
<b>53.10.2.5</b>	<b>Erection of PSCC/ Steel poles/ lighting pole (BOQ Ref 1.7,1.8,2.2,2.3,4.1)</b>	
<b>53.10.2.5.1</b>	On completion of erection including-foundation	65%
<b>53.10.2.5.2</b>	On completion of line stringing	15%
<b>53.10.2.5.3</b>	On Charging	20%
<b>53.10.2.6</b>	<b>Erection of any other item, not covered above, the terms of payment shall be as follows</b>	
<b>53.10.2.6.1</b>	On Erection	70%
<b>53.10.2.6.2</b>	On Charging or completion in all respect	30%
<b>53.10.3</b>	<b>O&amp;M PART (SCH-5)(BOQ Ref -11)</b>	
<b>53.10.3.1</b>	On submission of monthly running Bills at the quoted/ accepted monthly charges and as certified by BHEL engineer	100%
<b>54.0</b>	<b>QUANTITY VARIATION</b>	
<b>54.1</b>	It will be dealt as per GCC terms & conditions.	
<b>55.0</b>	<b>DELETED</b>	
<b>56.0</b>	<b>LIQUIDATED DAMAGE</b>	
<b>56.1</b>	<b>Package-A (SCH-3 &amp;SCH-4 -VOLUME-III)</b>	
56.1.1	If the successful bidder fails to complete the entire scope within the completion period for reasons attributable to them, BHEL shall have the right to recover as liquidated damages (LD) a sum equivalent to 0.5 % of the contract price of package-A, for delay of each week or part thereof	
56.1.2	The liability for delay shall not, in any case, exceed 10 % (Ten per cent) of the contract price of Package-A, Contract Value for this purpose, shall be the final executed value exclusive of ORC, Extra Works executed on Manday rate basis, Supplementary/ Additional Items and PVC	
56.1.3	Deleted	
<b>56.2</b>	<b>Package-B (SCH-5 -VOLUME-III)</b>	
56.2.1	If the contractor fails to operate & maintain the construction power network with allied equipments, as a result the entire system or part of the system remains non-functional/ inoperative for more than 1 day for reasons attributable to them, BHEL shall have the right to impose Liquidated Damage/Penalty at the rate of 0.15% of the contract value of Package-B for each day of delay or part thereof subject to a maximum of 10% of the contract value of Package-B. Contract Value for this purpose shall be the final executed value exclusive of ORC, Extra Works executed on Manday rate basis, Supplementary/ Additional Items and PVC	
56.3	BHEL shall deduct aforesaid amounts from any money due or which may become due to the successful bidder and/ or recover from the bank guarantees/ security deposit of the successful bidder. To be entitled to impose such compensation/ penalty/ recovery, BHEL will not be required to prove that they have incurred such amount as actual damage	
56.4	BHEL reserve the right to complete the job through other resource without notice to successful bidder of the work not so executed, without cancelling the order/ contract in respect of the work not yet due for completion. In such case recovery shall be at actual plus 5% overhead	
56.5	BHEL reserve the right to cancel the order/ contract or a portion thereof for the work not so completed at the risk & cost of the successful bidder and the successful bidder shall be liable to BHEL for any excess costs thereof	
56.6	Where action is taken as per above, the successful bidder shall be liable for any loss, which BHEL may sustain on that account. The successful bidder shall not be entitled to any gain on such action and the manner & the method of such purchase shall be at the	

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	discretion of BHEL. It shall not be obligatory on the part of BHEL to serve a notice of such completion, through other resource, on successful bidder.
56.7	In case of LD recovery, the applicable GST shall also be recovered from vendor/Contractor/ suppliers
<b>57.0</b>	<b>GUARANTEE (APPLICABLE FOR Package-A):</b>
57.1	Even though the work will be carried out under supervision of BHEL, the contractor will be responsible for the quality of workmanship, quality of materials/ items and design for which the contractor is responsible.
57.2	The contractor shall guarantee the work executed under the scope of the contract for a period of 12 (twelve) months from the date of start of guarantee period as certified by the engineer (i.e. on readiness of entire Construction power network as per approved drawing) and shall rectify free of cost all defects due to faulty supply or work done. In case the contractor fails to repair/ replace the defective works within the time specified by the engineer, BHEL may proceed to undertake the repairs/ replace such defective works at contractor's risk and cost without prejudice to any other rights and recover the same from security deposit/ other dues.
<b>58.0</b>	<b>CONTRACT RATE/ PRICE</b>
58.1	Bidder shall quote their rates strictly in accordance with prescribed price schedule, Volume-III (latest revision).
58.2	BHEL shall place separate orders for (i) <b>Package-A</b> (Supply part; & Service part) and (ii) <b>Package-B</b> (O&M part) as per corresponding price components of Volume-III, ie as per respective schedules of Volume-III.
58.3	The quantities of the various items mentioned in each schedule are approximate, based on very preliminary information and may vary to any extent or to be deleted altogether. Other clauses in this respect shall be as per GCC cl no 2.14.
<b>59.0</b>	<b>AS BUILT DRAWING</b>
	The successful bidder shall submit as-built drawing for handing over to BHEL/ customer after completion of work. The successful bidder will be given one copy of working drawing. However, the successful bidder have to make those 'as-built drawing' from the modified drawing which is already followed in between the project work. The successful bidder has to submit as-built drawing with RA bill, in which the work (carried out as per modified drawing) is claimed.
<b>60.0</b>	<b>OTHER TERMS</b>
60.1	Drawings issued, if any, are for tender purpose only. No additional financial implication will be entertained by BHEL at a later date on account any alteration to this, except otherwise specifically addressed in the tender.
60.2	Successful bidder shall provide temporary barricade all around the working area to avoid any untoward incident, as per guideline of customer.
60.3	For materials supplied by the successful bidder for the project, entry gate pass duly signed & stamped, as per guidelines of the project, to be submitted positively for record purpose.
60.4	All other terms & conditions of this specification, not mentioned above shall be governed by the pertinent provisions of GCC, Volume-IB.

**Note: ADDITIONAL DRAWINGS ATTACHED. (Attached Separately)**

**1. Drawing No. : PLOT PLAN**

**2. Drawing No.: Nil (Tentative SLD for construction power)**

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**ANNEXURE-I**  
**LIST OF T&P AND MMD TO BE DEPLOYED BY SUCCESSFUL BIDDER**

SL NO	DESCRIPTION	TENTATIVE DEPLOYMENT SCHEDULE
1.0	10/12/14/18 MT Nextgen pick & carry type tyre mounted mobile crane.(like Escorts F15 Pick and Carry Eqpt.), 1 no	As per requirement
2.0	SKY LIFT/ MAN LIFTER /HYDRAULIC PLATFORM/ (Working height upto 13 Mtr)-01 nos	As per requirement during (E&C) period.
3.0	Crimping tool of all sizes (Up to 1000 sqmm core size)	Quantity & schedule of deployment shall be jointly decided at site within 10 days of order.
4.0	Box spanner set (Taparia or equivalent)	- do -
5.0	Vacuum cleaner cum blower	- do -
6.0	Handheld multimeter (digital) (500 V & 1000 V)	- do -
7.0	2500 KV hand operated megger	- do -
8.0	Earth tester	- do -
9.0	Phase sequence tester	- do -
10.0	Relay test kit	- do -
11.0	Oil filtering machine with BDV kit	- do -
12.0	Welding machine	- do -
13.0	Hand held emergency light	- do -
14.0	Tong tester up to 1000A	- do -
15.0	Other hand tools like screw driver, pliers, spanners	- do -
16.0	Tree/ grass cutting tools	- do -
17.0	Digging tools	- do -
18.0	Flash light/ torches	- do -
19.0	Gas cutting set	- do -
20.0	Misc MMD	- do -
21.0	Hydraulic Excavator / Poclain	- do -
22.0	Dumper	- do -
<b>NOTE</b>		
1.0	Bidder shall note that this list is not exhaustive and they may be required to provide additional T&Ps not stated in the list for proper execution of job, at no extra cost to BHEL.	
2.0	T&P and MMD shall be mobilized and deployed by successful bidder, as required at site for successful execution of the job as per above tentative deployment plan. However, specific deployment plan of T&P, MMD shall be jointly finalised based on project requirement prior to start of work. The plan might undergo revision depending on project requirement. Depending upon the jointly agreed deployment program, any additional t&P, MMD, if required for proper completion of job, shall have to be deployed by the successful bidder. Similarly, if any of the aforesaid items is not required for the job as per jointly agreed program, the successful bidder need not have to deploy the same.	
3.0	Bidder shall note periodical testing & calibration of testing equipment are to be done through recognized / accredited agencies and copy of test certificates to be submitted to BHEL as per 'ISO' norms.	
4.0	During execution age of all T&Ps must not exceed 15 years. In case of exceeding the same the T&P is subject to restriction.	

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## **ANNEXURE-II**

### **LIST OF MATERIALS AND CONSUMABLE TO BE SUPPLIED BY SUCCESSFUL BIDDER**

SL NO	DESCRIPTION	TENATIVE DEPLOYMENT SCHEDULE
1.0	Insulation tape	As per requirement of the job, to be jointly decided at site within 10 days of order.
2.0	White spirit	- do -
3.0	Kerosene/ Petrol/ Diesel	- do -
4.0	Detergent/ soap/ cleaning chemicals	- do -
5.0	Welding electrode.	- do -
6.0	Gas	- do -
7.0	Other consumable	- do -
8.0	Fuse wire of required current ratings at 33/11/0.433 voltage grades	- do -
9.0	LT Jointing kit	-do-

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

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**ANNEXURE-III**  
**LIST OF APPROVED MANUFACTURER OF ITEMS**

SL NO	DESCRIPTION OF ITEM	PROPOSED MANUFACTURER/ MAKE
01	INSULATORS WITH ASSOCIATED HARDWARE AND FITTINGS	JAYSHREE INSULATORS, KOLKATA MODERN INDUSTRIES, ABU ROAD WS INSULATORS, CHENNAI BHEL WS INDUSTRIES LTD, BANGALORE AREVA IEC, BHOPAL BIRLA NGK MODERN INSULATORS EQUIVALENT SUBJECT TO APPROVAL OF BHEL
02	LIGHTENING ARRESTOR	CROMPTON GREAVES LTD ELPRO INTERNATIONAL, PUNE OBLIUM ELECTRICALS PVT LTD, HYDERABAD ELPRO INTERNATIONAL, PUNE OBLUM ELECTRICALS PVT L TO, HYDERABAD WS INDUSTRIES LTD, CHENNAI CGL SCHNEIDER EQUIVALENT SUBJECT TO APPROVAL OF BHEL
03	STRUCTURAL STEEL	SAIL, TISCO EQUIVALENT SUBJECT TO APPROVAL OF BHEL
04	HT CABLE TERMINATION KIT JOINTING KIT	RAYCHEM RPG, M-SEAL EQUIVALENT SUBJECT TO APPROVAL OF BHEL
05	AIR BREAK SWITCH AND ISOLATOR	BANANI SWITCHGEAR & ELECTRICAL IND, KOLKATA POWER & CONTROL TRANSFORMER IND, MUMBAI EASTLAND SWITCHGEAR PVT. LTD, KOLKATA ALLIANCE ENGINEERS PVT LTD, KOLKATA GR POWER SWITCHGEAR, HYDERABAD ABB, BARODA CGL ELPRO INTERNATIONAL HEVELM SWITCHGEAR & STRUCTURES MULLER ELECTROLITE RAMA ENGINEERING WORKS, BULANDSAHAR JAIPURIA BROTHERS, DELHI POWER LINE ACCESSORIES, RAIPUR LAXMI ELECTRICAL, DELHI RASHTRIYA ELECTRCALS, DELHI SCHNEIDER EQUIVALENT SUBJECT TO APPROVAL OF BHEL
06	SPUN POLE / PCC POLE	APPROVED VENDOR OF STATE DISTRIBUTION CO/ REC EQUIVALENT SUBJECT TO APPROVAL OF BHEL
07	RAIL POLE	SAIL, TISCO EQUIVALENT SUBJECT TO APPROVAL OF BHEL

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08	CTS/CVTS/PTS	BHEL, BHOPAL ABB, BARODA SCHNEIDER WS INDUSTRIES LTD, BANGALORE TELK CGL AREVA SARA SWITCHGEAR, DELHI NATIONAL ELECTRICAL MEERUT SCT, MEERUT PARAMAX TRANSFORMER LTD, GREATER NOIDA PRAGATHI INDUSTRIES, KOLKATA JYOTHI LTD., BARODA PRECISE ELECTRICALS, ALLAHABAD PERFECT ELECTRICALS, DELHI EQUIVALENT SUBJECT TO APPROVAL OF BHEL
09	SWITCH YARD HARDWARE	RASTRA UDYOG, KOKATA KLEMMEN ENGINEERING, CHENNAI AARPEE ASSOCIATES PVB ENTERPRISES EQUIVALENT SUBJECT TO APPROVAL OF BHEL
10	SWITCH YARD CONTROL & RELAY PANELS	AREVA SCHNEIDER ASEA BROWN BOVERI LTD SIEMENS LTD EQUIVALENT SUBJECT TO APPROVAL OF BHEL
11	CONTROL PANEL	SIEMENS SCHNEIDER CGL ABB AREVA BHEL EQUIVALENT SUBJECT TO APPROVAL OF BHEL
12	BATTERY	EXIDE BATTERIES, CALCUTTA AMARA RAJA BATTERIES BHARAT BATTERIES EQUIVALENT SUBJECT TO APPROVAL OF BHEL
13	BATTERY CHARGER	CHABBI ELECTRICAL LIMITED, MUMBAI HBL NIFE POWER SYSTEMS LIMITED, HYDERABAD CALDYNE AUTOMATICS LTD, KOLKATA EMERSON NETWORK POWER(INDIA) PVT. LTD MASSTECH CONTROL PVT LTD, MUMBAI SABNIFE POWER SYSTEMS LTD, HYDERABAD STATCON UNIVERSAL EXPO FINE, JAIPUR VOLTAMP EQUIVALENT SUBJECT TO APPROVAL OF BHEL
14	CABLE END TERMINATION KITS	RAYCHEM LTD, MUMBAI EQUIVALENT SUBJECT TO APPROVAL OF BHEL

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15	T Aluminum Conductor Steel Reinforced 'DOG' conductors (Aluminum size 6/4.72 mm (100 mm <sup>2</sup> nominal Aluminum area,) 7/1.57 mm steel wire)	Nirmal Wires Pvt Ltd Prem Cables Private Limited Laser Power & Infra Private Limited Mahavir Transmission Limited Lumino Industries Limited Rajasthan cables and conductors pvt ltd
16	CABLE GLANDS	COMET DOWELS EQUIVALENT SUBJECT TO APPROVAL OF BHEL

NOTE	
1.0	Bidder shall procure items from this list as per tender provision.
2.0	Successful bidder, after award of job but within the stipulated time frame, shall firm up with BHEL the modality of procurement, dispatch, etc regarding specific documentation (TDS, QP, TC, COC, etc) required for BHEL's acceptance, inspection procedure for dispatch clearance, documentation required for dispatch, etc.
3.0	In exceptional case, if the successful bidder fails to procure any item from the list of approved manufacturer, they have to put up request, proposed alternate equivalent manufacturer, attaching relevant documents for BHEL's acceptance, without which no item shall be procured & delivered for the subject job.
4.0	Similarly, if some item is not covered in the list of approved manufacturer, successful bidder have to put up request, proposing manufacturers, attaching relevant documents for BHEL's acceptance, without which no item shall be procured & delivered for the subject job.
5.0	In case if any additional manufacturers / sub-vendors, if required, may be approved by BHEL at its discretion on receipt of request from the vendor along with all credential documents of manufacturers / sub-vendors.