



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN – 01

Ref: PSER:SCT:BNP-I1778:TCN-01

Date: 05-11-2016

| Sub | Tender Change Notice (TCN) – 01. | |
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| Job | Package-A: Erection, laying/ installation, testing, commissioning, handing over, etc of C&I (control & instrumentation) systems of boiler & auxiliaries, TG & auxiliaries, station C&I, misc systems & equipment, etc of 1x660 MW unit # 3 & common systems at 2x660 MW IB-TPS, Banharpalli, Odisha. Package-B: Erection, laying/ installation, testing, commissioning, handing over, etc of C&I (control & instrumentation) systems of boiler & auxiliaries, TG & auxiliaries, station C&I, misc systems & equipment, etc of 1x660 MW unit # 4 at 2x660 MW IB-TPS, Banharpalli, Odisha. | |
| Ref | 1.0 | Tender no. PSER:SCT:BNP-I1778:16. |
| | 2.0 | BHEL's NIT, vide reference no PSER:SCT:BNP-I1778:5274, Dated 24-10-2016. |
| | 3.0 | All other pertinent issues till date. |

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

1. Revised VOLUME-IF-TCC-CML-E, REV-1 is attached herewith, superseding VOLUME-IF-TCC-CML-E, REV-0 issued earlier along with NIT.
2. Fifth para of Point No 2 under Annexure-A-Amendment to GCC/SCC of NIT shall be modified as below:

| Sl. No. | Existing Provision | Modified Provision |
|---------|---|--|
| (i) | In case total EMD amount is more than Rs. 20 Lakh, the amount in excess of Rs. 20 lakh may be accepted in the form of Bank Guarantee from scheduled bank. The Bank Guarantee in such cases shall be valid for atleast six months from the date of bid submission as per NIT/TCN. EMD of successful tenderer will be retained as part of Security Deposit. | In case total EMD amount is more than Rs. 20 Lakh, the amount in excess of Rs. 20 lakh may be accepted in the form of Bank Guarantee from scheduled bank. The Bank Guarantee in such cases shall be valid for atleast six months. EMD of successful tenderer will be retained as part of Security Deposit. |

3. Due date of submission of offer is extended from 15-11-2016 to **22-11-2016 (15-00 hrs)**. Bidders are requested to submit their offer by extended due date positively.
4. Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder shall submit no deviation certificate as per enclosed format only.
5. All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

ENGR (SCT)

Encl: As above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

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

फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : (033) 2339-8000/ 2339 8231

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This volume shall be construed as part of tender document and shall be read along-with others volumes of tender. Unless otherwise specified, in case of any confusion of any clause/ provision of this volume or any conflict/ inconsistency of any clause/ provision of this volume with that of other volume, the same shall be brought out by the bidder in writing to BHEL for clarification or during pre-bid discussions, if applicable, failing which most stringent interpretation in favour of BHEL shall be adopted and the same shall be binding to the bidder. Unless otherwise specified, all terms & conditions shall be applicable for entire scope and for each part/ package of tender.

| CLAUSE NO | DESCRIPTION |
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| 1.0 | NAME OF WORK |
| 1.1 | <p>PACKAGE-A (UNIT # 3 & COMMON)</p> <p>Providing labour, supervision, T&Ps, consumables, etc for receipt from store/ storage yard, watch & ward, transportation to site, pre-assembly (as required), erection, testing, commissioning, trial run, handing over, etc, as per technical specification and terms & conditions of tender taking into account all amendment/ addendum, clarifications, confirmations and agreements till date of various C&I (control & instrumentation) systems of boiler & auxiliaries, TG & auxiliaries, station C&I, misc systems & equipments, etc of 1x660 MW unit # 3 & common systems at 2x660 MW IB-TPS, Banharpalli, Odisha.</p> |
| 1.2 | <p>PACKAGE-B (UNIT # 4)</p> <p>Providing labour, supervision, T&Ps, consumables, etc for receipt from store/ storage yard, watch & ward, transportation to site, pre-assembly (as required), erection, testing, commissioning, trial run, handing over, etc, as per technical specification and terms & conditions of tender taking into account all amendment/ addendum, clarifications, confirmations and agreements till date of various C&I (control & instrumentation) systems of boiler & auxiliaries, TG & auxiliaries, station C&I, misc systems & equipments, etc of 1x660 MW unit # 4 at 2x660 MW IB-TPS, Banharpalli, Odisha.</p> |
| 2.0 | BROAD SCOPE OF WORK |
| 2.1 | The intent of this tender is to provide services for execution of the work according to most modern and proven techniques and codes. The omission of specific reference to any method, equipment or material necessary for the proper and efficient services towards installation of the equipment shall not relieve successful bidder of the responsibility of providing such services/ facilities to complete the work or portion of work awarded to him. The quoted/ accepted rates/ price shall deem to be inclusive of all such contingencies. |
| 2.2 | The work to be carried out under scope of this specification covers complete work of handling including receipt from stores/ yard located within project premises, arranging their issue, transportation to site, temporary storage prior to erection, if required, cleaning, preservative painting, erection, alignment, welding, leveling, adjustment, etc, pre-commissioning tests, start-up & trial run of individual equipment, final commissioning, trial run, handing over to BHEL/ customer, performance & guarantee (PG) test, reconciliation of materials, returning unused materials to BHEL stores/ yard/ other places, designated by BHEL of various equipments, items, etc as enumerated in various volumes/ sections of tender including price schedule. |
| 2.3 | The work shall conform to dimensions and tolerances given in various drawings and documents that will be provided during erection. If any portion of works is found to be defective in workmanship & not conforming to drawings/ documents or other stipulations, 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. |
| 2.4 | It is not the intent of this specification to specify herein all the details of erection and commissioning. However, the system shall conform in all respects to high standards of quality and workmanship for performing the required duties in a manner acceptable to purchaser who will interpret the meaning of drawings and |

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| | specifications and shall be entitled to reject any work or material, which in his judgments is not in full accordance herewith. |
| 2.5 | Omission of specific reference to any fabrication/ erection method, equipment or material necessary for proper & efficient working of the plant shall not relieve successful bidder of the responsibility of providing such facilities to complete the work at quoted rates. Any mismatch/ defect found due to mistake in fabrication/ erection shall have to be rectified by successful bidder free of cost. Inspection by BHEL/ customer does not relieve successful bidder of responsibility of executing quality erection. |
| 2.6 | Following shall be the responsibility of successful bidder and have to be provided within finally accepted rates/ prices. |
| 2.6.1 | Provision as required of all types of labour, supervisors, engineers, watch and ward, tools & tackles, calibrated MMD as specified and otherwise required for the work, consumables for erection, testing and commissioning including handling. |
| 2.6.2 | Proper out-turn as per BHEL plan and commitment. |
| 2.6.3 | Completion of work as per BHEL schedule. |
| 2.6.4 | Good quality and accurate workmanship for proper performance of the equipment. |
| 2.6.5 | Repair and rectification. |
| 2.6.6 | Preservation/ re-conservation of all components during storage/ erection/ commissioning till handing over. |
| 2.7 | Dismantling, removal of debris, levelling, etc of all temporary building, structure, pipeline, cable, etc as per instruction of BHEL on completion of work. If successful bidder fails to do so, BHEL will get the job done through other agency and the cost along with applicable overhead will be recovered from successful bidder. Decision of BHEL in this regard shall be final & binding on successful bidder. However, the scope of dismantling and leveling the area is limited only to successful bidder's site office, yard and other spaces occupied by successful bidder. |
| 2.8 | BHEL - Power Sector (ER) is ISO 9001-2008 certified company. Quality of work, to customer's satisfaction and as per system requirements are the essence of ISO:9001-2008 certification. Successful bidder in all respects will organise his work, systems, environment, process control documentation, T&Ps, measuring and monitoring devices (MMDs) etc as per instructions of BHEL engineer. |
| 2.9 | Successful bidder will comply with HSE (Health, Safety & Environment) requirements of BHEL and follow all applicable Operational Control Procedures (OCPs) within quoted rate/ price. |
| 2.10 | All other points shall be as per the terms & conditions and specification along with aforesaid references together with amendments incorporated thereto. |
| 2.11 | Successful bidder shall construct closed/ semi closed/ open stores shed for proper storage of items received by them without extra cost |
| 2.12 | Successful bidder should use fire proof tarpaulin only to cover any material either in open or at a covered area. |
| 2.13 | Successful bidder should deploy fire extinguishers of required number in his office and work areas. |
| 2.14 | Earthing of equipments including instruments is also included under his scope. |
| 2.15 | Successful bidder shall take full responsibility of testing, pre-commissioning and commissioning of the equipment being installed by him or installed by others but being commissioned by him under the overall supervision of BHEL. It shall be the responsibility of successful bidder to arrange all the testing/ measuring instruments and complete all the testing, pre-commissioning and commissioning activities for the particular equipment as per relevant standards, code of practice, manufacturer's instructions, applicable quality plans for installation, testing & commissioning and BHEL norms. All these will be witnessed by BHEL/ representative of customer or both and reports signed jointly. Successful bidder shall submit a check list to BHEL prior to taking up testing and commissioning activities which shall be approved by BHEL and the activities shall be carried out in accordance with the check list. |
| 2.16 | Successful bidder shall provide necessary supervision, skilled/ semi-skilled workmen, competent experienced erection and commissioning engineers to carry |

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| | out the tests independently, electrical license holder supervisors and electricians, erection tools and tackles, consumable, testing, measuring & commissioning of instrument/ equipment of required range, administrative personnel, transport vehicles, security guards for timely execution of the contract. |
| 2.17 | If occasion so demands that in order to achieve project schedule/ milestone, various activities are to be carried out at a time and successful bidder should be able to provide necessary manpower, tools, tackles, equipment testing and measuring instruments for simultaneous working round the clock at no extra cost and no extra claim whatsoever will be entertained in this account. |
| 2.18 | While testing/ commissioning, if the system involving the equipment erected and commissioned by successful bidder is observed to be not functioning properly and successful bidder considers it to be arising due to defects in the purchaser's equipment / system, it shall be the responsibility of successful bidder to check, establish and demonstrate that either the defect exists in the purchaser's equipment/ system terminals or there is no defect in the equipment/ system installed by successful bidder inclusive of the interconnecting cabling up to the terminals of purchaser's equipment. If the defect is established to be in the purchaser's equipment or in the interconnecting cables not erected by successful bidder the same shall be rectified by the purchaser. |
| 2.19 | Manufacturer's drawings must be studied before handling, erection, testing and commissioning of switchgear, panel, cable. Dragging of equipment should be avoided and use of a crane and trailer/ truck should be made for the handling purpose while transporting to various site of erection from the site stores. While lifting panels in packed condition, utmost care should be taken to avoid any damage to protective and metering equipments. The panels should preferably be kept inside the packing box till the foundations are made ready. However, once the material is issued to successful bidder for handling/ erection from BHEL custody, the preservation/ conservation will be completely in the scope of successful bidder. |
| 2.20 | It will be the responsibility of successful bidder to re-serve/ preserve the materials equipment, provide watch ward after issued from BHEL stores. Successful bidder will do the routine maintenance of the equipment or will attend minor repair/ trouble shooting jobs after commissioning till taken over by customer for commercial operation of the plant. Successful bidder will have to submit test reports protocols, log-sheets at different stages of commissioning and trial operation in formats prescribed by BHEL. |
| 2.21 | Successful bidder has to arrange all safety appliances required during acid filling/ charging of battery and other items like sp gravity meter, thermometer, jerry cans, funnels, etc. Resistance box with all interconnecting cables, PVC drums for water loads, etc of suitable rating/ capacity for carrying out capacity/ discharge test of batteries shall be arranged. Also, maintenance of battery parameters, after commissioning till handing over shall be carried out. |
| 2.22 | Rotation of motor terminal boxes and minor modification to suit cable termination, if required shall be carried out at no extra cost. |
| 2.23 | For soot blowers, valves and dampers, operated through associated MCCs, entire commissioning including setting of limit/ torque switch and position feedback unit, electrical control gear of actuators of MOVs & damper, is included in the scope of successful bidder. |
| 2.24 | Before starting erection job, successful bidder shall ensure that the area is sufficiently cleaned against ingress of dust & water, and all debris have been cleared off from the floor to a designated area as per instruction of engineer. Successful bidder shall arrange to get the working area and surroundings cleaned daily to ensure a dust free atmosphere for working. |
| 2.25 | The accuracy of all equipments, instruments and their functioning shall be established before they are permitted for use on the job. If the engineer doubts the accuracy of the precision tools any time during erection, successful bidder shall arrange the checking of tools/ equipment/ instruments at his cost. |
| 2.26 | Foundations for all equipment shall be provided by BHEL. Dimensions & locations |

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| | of foundations, pockets, anchor bolt shall be checked by successful bidder for their correctness as per drawings/ documents. Further, top elevation of foundations shall be checked with respect to bench marks, etc. All minor adjustments of foundation level, dressing and chipping of foundation surfaces up to 50 mm, enlarging the pockets in foundations, etc as may be required for erection of equipment/ plants shall be carried out by successful bidder within the quoted/ accepted rates/ price. |
| 2.27 | While on the job, care is essential to avoid too much chipping and resultant lowering of level. In case of excess chipping successful bidder has to arrange additional packing plates as per requirements provided it is allowed by BHEL engineer. When required by manufacturers, the embedded sub-sole plates shall be scraped and checked with Prussian blue to get the required contact with frames. |
| 2.28 | Successful bidder shall ensure perfect matching of packer plates including scraping and blue matching with foundation by dressing the foundation, as well as perfect matching between packer plates and base plate of equipment to the satisfaction of BHEL engineer. |
| 2.29 | All civil works, viz grouting/ excavation/ casting of foundation anchor points for derricks, winches, guy ropes, fastening, etc and foundations required for any other temporary supports/ works, as required for safe & efficient operation of tools & tackles, shall be successful bidder's responsibility. For these civil works all materials excluding normal cement and required facilities will have to be arranged by successful bidder at their own cost. |
| 2.30 | All minor civil works for main equipment including drilling, chipping, enlarging cutouts, foundation pockets, cable cut outs, etc have to be carried out by successful bidder at no extra cost. Grouting of equipments erected by successful bidder as per procedure is included in the scope. Materials like special cement, sand aggregates, etc including shuttering, curing, etc shall be arranged without any extra cost. |
| 2.31 | All other points shall be as per the terms & conditions and specification along with aforesaid references together with amendments incorporated thereto. |
| 3.0 | DEWATERING 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. |
| 4.0 | GENERAL TECHNICAL REQUIREMENTS (CODES AND STANDARDS) |
| 4.1 | 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, successful 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. |
| 4.2 | 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. |
| 4.3 | 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. |
| 4.4 | Tools used during erection and commissioning/ completion shall not be accepted except with the specific approval of the engineer. |
| 4.5 | 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, wherever required, obtaining approval for plant/ equipment supplied under the specification from statutory authorities shall be |

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| | the responsibility of successful bidder. |
| 5.0 | DRAWING AND DOCUMENT |
| 5.1 | Detailed drawings, specifications available with BHEL engineers. These documents will be made available to successful bidder during execution of work at site. Successful bidder shall ensure availability of all drawings/ documents at work place. |
| 5.2 | One set of drawings to carry out work will be furnished to successful bidder by BHEL on loan, which shall be returned to BHEL site after completion of work. Successful bidder's personnel shall take care of these documents given to them. |
| 5.3 | Successful bidder shall maintain a record of all drawings & documents available with them in a register as per format given by BHEL engineer. |
| 5.4 | 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. |
| 5.5 | Should any error or ambiguity be discovered in tender or information, successful bidder shall forthwith bring the same to the notice of BHEL before commencement of work. BHEL's interpretation in such cases shall be final & binding on successful bidder. |
| 5.6 | Deviation from design dimensions should not exceed permissible limit. Successful bidder shall not correct or alter any dimension details, without specific approval of BHEL. |
| 5.7 | Successful bidder, within the scope, 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 successful bidder. |
| 6.0 | GENERAL SERVICES TO BE RENDERED BY SUCCESSFUL BIDDER |
| 6.1 | Services for construction, fabrication, equipment erection, testing, trial run, commissioning/ completion of various equipment & accessories/ items under the contract. |
| 6.2 | Collecting materials from store/ open yard from time to time for fabrication/ erection as per the construction program as per flow of consignment. Successful bidder shall be the custodian of all the materials issued till the plant/ equipment is officially taken over by BHEL/ customer after complete erection and commissioning/ completion. Successful bidder shall maintain adequate security personnel and security measures for proper precaution and safety of material. |
| 6.3 | Deployment of all skilled and unskilled manpower required for erection supervision, watch & ward, for commissioning/ completion and other services to be rendered under this tender. |
| 6.4 | Deployment of all erection tools & tackle, construction machinery, transportation vehicles and all other implements in adequate number and size, appropriate for the erection work to be handled under scope of this tender except otherwise specified. |
| 6.5 | Supply of all consumables, eg welding electrodes, cable lugs upto 04 sqmm size, etc as well as materials required for temporary supports, scaffolding etc as necessary for such construction work, unless specified otherwise. |
| 6.6 | Providing support services for successful bidder's erection staff, eg construction of site offices, temporary stores, residential accommodation and transport to work site for erection personnel, watch & ward for security & safety of the materials under successful bidder's custody etc, as required. |
| 6.7 | Maintaining proper documentation of all site activities undertaken by successful bidder as per the proforma, mutually agreed with BHEL, submitting monthly progress reports as also any such document as and when desired by BHEL/ customer, taking approval of all statutory authorities eg, Factory Inspector, Provident Fund authority etc for respective portions of work under the jurisdiction of such statutes of laws. |
| 6.8 | As part of overall project management activity, successful bidder shall be responsible for proper co-ordination of erection activities during various phases of execution of the contract. Successful bidder shall identify a person designated as Construction Manager, with whom BHEL shall interact on matters related to execution of the contract. The construction manager shall be single point contact |

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| | person on behalf of successful bidder. BHEL shall interact with the Construction Manager only on all matters on co-ordination between BHEL and successful bidder. For timely completion of work successful bidder may have to work in one or more shifts. He will not be eligible for any extra charge on this account. |
| 6.9 | Successful bidder shall confine all their field of operations to those works which can be reformed without subjecting the equipment and materials to adverse effects, during inclement weather conditions, like monsoon, storms, etc and during other unfavourable construction conditions. No field activities shall be performed by successful bidder under conditions which might adversely affect quality and efficiency thereof, unless special precautions or measures are taken by successful bidder in proper and satisfactory manner in the performance of such works and with the concurrence of BHEL. Such un-favourable construction conditions in no way relieve successful bidder of his responsibility to perform the works as per schedule. |
| 6.10 | Successful bidder shall supply all skilled workmen like mill-wright fitters, welders, gas cutters, electricians, riggers, sarangs, erectors, carpenters, pipe fitters, masons, ladders, tin-smiths, instrument machanics, etc, in addition to other skilled, semi-skilled & unskilled workmen required for all works of handling and transportation from site store to erection site, erection, testing, commissioning/ completion contemplated under this tender. Only fully trained and competent men with previous experience on the job shall be employed. They shall hold valid certificates wherever necessary. BHEL reserve the right to decide on the suitability of the workers and other personnel who will be employed by successful bidder. BHEL reserve the right to insist on removal of any employee of successful bidder at any time, if they find him unsuitable & successful bidder shall forthwith remove him. |
| 6.11 | The supervisory staff employed by successful bidder shall be technically qualified and experienced in the area of work. They shall ensure proper out turn of work and discipline on the part of labour put on the job by successful bidder and in general see that the works are carried out in a safe and proper manner and in coordination with other labour and staff employed directly by BHEL or other successful bidders of BHEL and BHEL's client. |
| 6.12 | Successful bidder shall also furnish daily labour report showing by classification the number of employees engaged in various categories of work a progress report of work as required by BHEL engineer. |
| 6.13 | The work shall be executed under the usual conditions affecting major power plant construction and in conjunction with numerous other operations at site. Successful bidder and his personnel shall co-operate with other personnel, and other agencies, coordinate his work with others and proceed in a manner that shall not delay or hinder the progress of work as a whole. |
| 6.14 | Successful bidder's supervisory staff shall execute the work in the most substantial and workman like manner in the stipulated time. Accuracy of work and aesthetic finish are essential part of this contract. Successful bidder shall be responsible to ensure that assembly and workmanship conform to the dimensions and tolerance given in the drawing / instruction given by BHEL engineer from time to time. |
| 6.15 | It is the responsibility of successful bidder to engage their workman in shifts or on overtime basis for achieving target set by BHEL during erection, commissioning/ completion and testing period. Successful bidder's quoted rate shall include all these contingencies. |
| 6.16 | Any other service, although not specifically called for but required for a contract of the size and nature indicated in the tender. |
| 7.0 | PROTECTION |
| 7.1 | Equipment having anti-friction or sleeve bearing shall be protected by weather tight enclosures. Coated surfaces shall be protected against impact, abrasion, discoloration and other damages. Surfaces which are damaged shall be repainted. |
| 7.2 | 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 |

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| | other substantial type covering to ensure their full protection. All exposed threaded parts shall be greased & protected with metallic or other substantial type protector. |
| 7.3 | 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. |
| 7.4 | 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. However, the required preservatives will be supplied to successful bidder free of cost. All other consumables including wire brush, emery papers, painting brush etc to be supplied by successful bidder within the quoted rate. |
| 8.0 | GENERAL GUIDELINES FOR FIELD ACTIVITIES |
| 8.1 | Successful bidder shall execute the works in a professional manner so as to achieve the target schedule without any sacrifice on quality and maintaining highest standards of safety and cleanliness. |
| 8.2 | Successful bidder shall co-operate with BHEL/ customer and other successful bidders working in site and arrange to perform his work in a manner so as to minimise interference with other successful bidder's works. BHEL's engineer shall be notified promptly of any defect in other successful bidders' works that could affect successful bidder's work. If rescheduling of successful bidder's work is requested by the customer's/ BHEL's engineer in the interest of overall site activities, the same shall be complied with by successful bidder. In all cases of controversy, the decision of BHEL shall be final and binding on successful bidder without any commercial implication. |
| 8.3 | BHEL shall hold weekly meeting of all successful bidders working at site at a time and a place to be designated by the engineer. Successful bidder shall attend such meetings and take notes of discussions during the meeting and the decisions of the engineer and shall strictly adhere to those decisions in performing this work. In addition to the above weekly meeting, engineer may call for other meetings either with individual successful bidders or with selected number of successful bidders and in such a case successful bidder, if called will also attend such meetings. |
| 8.4 | Time is the essence of the contract and successful bidder shall be responsible for performance of his work in accordance with the specified construction schedule. If at any time successful bidder is falling behind the schedule, he shall take necessary action to make good of such delays by increasing his work to comply with the schedule and shall communicate such action in writing to the engineer, satisfying that his action will compensate for the delay. Successful bidder shall not be allowed any extra compensation for such action. |
| 8.5 | The engineer shall however not be responsible for provision of additional labour and or materials or supply of any other services to successful bidder except for the co-ordination work between various successful bidders as set out earlier. |
| 8.6 | The works under execution shall be open to inspection & supervision by BHEL's/ customer's engineer at all times. 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/ customer. |
| 8.7 | 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 successful bidder. |
| 8.8 | Successful bidder shall comply with all the rules and regulations of the local authorities, all statutory laws including Minimum Wages, Workmen Compensation etc. All registration and statutory inspection fees, if any, in respect of the work executed by successful bidder shall be to his account. |

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| 8.9 | All the works such as cleaning, checking, levelling, blue matching, aligning, assembling, temporary erection for alignment, opening, dismantling of certain equipment for checking and cleaning, surface preparation, edge preparation, fabrication of tubes and pipes as per general engineering practice at site, cutting, grinding, straightening, chamfering, filling, chipping, drilling, reaming, scrapping, shaping, fitting-up, bolting/ welding, etc as may be applicable in such erection and necessary to complete the work satisfactorily, are to be treated as incidental and the same shall be carried out by successful bidder as part of the work. |
| 8.10 | It is the responsibility of successful bidder to do the alignment etc if necessary, repeatedly to satisfy engineer, with all the necessary tools & tackles, manpower etc. The alignment will be complete only when jointly certified so, by successful bidder's engineer and BHEL. Also successful bidder should ensure that the alignment is not disturbed afterwards. |
| 8.11 | Equipment and material, in case wrongly installed, shall be removed and reinstalled to comply with the design requirement at successful bidder expense, to the satisfaction of BHEL/ customer. |
| 8.12 | After identification of erection materials by BHEL at BHEL's store/ storage yard, it shall be the responsibility of successful bidder to take delivery of materials from BHEL's store/ storage yard by successful bidder's own manpower and re-stack the leftover materials as per erection sequence at BHEL store at their own cost. The entire activities are to be carried out under supervision of BHEL. |
| 8.13 | Common road shall be provided by BHEL free of cost, however, temporary individual site approaches for erection/ work spots under the scope of work, as required for movement of cranes, trailers, trucks, etc of individual successful bidder shall be arranged by individual successful bidder at their own cost. |
| 8.14 | Successful bidder will have to erect temporary approach, scaffolding and provide suitable platform at places (as desired by BHEL) for the purpose of inspection/ testing by BHEL personnel. |
| 9.0 | ERECTION SERVICE |
| 9.1 | As part of overall project management activity, successful bidder shall be responsible for proper co-ordination of erection activities during various phases of execution of contract. Successful bidder shall identify a person as Construction Manager, with whom BHEL shall interact on matters related to execution of contract. The Construction Manager shall be the single point contract person on behalf of successful bidder. BHEL shall interact with the Construction Manager only on all matters on co-ordination between BHEL and successful bidder. |
| 9.2 | Successful bidder shall confine all his field operations to those works which can be reformed without subjecting equipment/ materials to adverse effects, during inclement weather conditions like monsoon, storms, etc and during other unfavorable construction conditions. No field activities shall be performed by successful bidder under conditions which might adversely affect the quality & efficiency thereof, unless special precautions or measures are taken by successful bidder in proper & satisfactory manner in performance of such works and with the concurrence of BHEL. Such unfavorable construction conditions in no way relieve successful bidder of his responsibility to perform the works as per the schedule. |
| 9.3 | Successful bidder shall provide all the skilled workmen, welders, gas cutters, electricians, riggers, serangs, erectors, carpenters, fitters, masons, lagers, tin-smiths, instrument mechanics etc., in addition to other skilled, semi-skilled and unskilled workmen required for all the works of handling and transportation from site store to erection site, erection, testing and commissioning, trial run etc. cotemplated under this specification. Only fully trained and competent men with previous experience on the job shall be employed. They shall hold valid certificates wherever necessary. BHEL reserves the right to decide on the suitability of the workers and the other personnel who will be employed under successful bidder. BHEL reserves the right to insist on removal of any employee of successful bidder at any time, if they find him unsuitable and successful bidder shall forthwith remove him. |
| 9.4 | The supervisory staff employed by successful bidder shall be technically qualified |

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| | and experienced in the area of work. They shall ensure proper out turn of work and discipline on the part of labour put on the job by successful bidder and in general see that the works are carried out in a safe and proper manner and in co-ordination with other labour and staff employed directly by BHEL or other successful bidders of BHEL and BHEL's client / consultant. |
| 9.5 | Successful bidder shall finish daily labour report showing by classification the number of employees engaged in various categories of work a progress report of work as required by BHEL engineer. A daily erection progress report should be sent to BHEL as required by BHEL engineer. |
| 9.6 | The work shall be executed under the usual conditions affecting major power plant construction and in conjunction with numerous other operations at site. Successful bidder and his personnel shall co-operate with other personnel, and other agencies, co-ordinating their work with others and proceed in a manner that shall not delay or hinder the progress of work as a whole. |
| 9.7 | Successful bidder's supervisory staff shall execute the work in the most substantial and workman like manner in the stipulated time. Accuracy of work and aesthetic finish are essential part of this contract. Successful bidder shall be responsible to ensure that assembly and workmanship conform to the dimensions and tolerance given in the drawing/ instruction given by BHEL engineer from time to time. |
| 9.8 | It is the responsibility of successful bidder to engage his workman in shifts or on overtime basis for achieving the target by BHEL during erection, commissioning & testing period. Successful bidder has to deploy shift-wise service round the clock if required for the progress of the work and to achieve the milestones in schedule without any extra cost. Similar type of round the clock service is mandatory during trial run operation, PG test and also during the shutdown period of the system, where the pending works are permitted to carry out only during shutdown of the system. Successful bidder's quoted rate shall include all these contingencies. |
| 9.9 | Successful bidder shall arrange for supply and installation of temporary scaffolding/ platform as required to facilitate faster & proper erection of equipments without any financial burden to BHEL. |
| 9.10 | Independent testing & commissioning of equipments by competent commissioning engineers to the entire satisfaction of BHEL is included in the scope of work. Testing & commissioning of protection relays, CTs, PTs, etc will require specialized expertise and for this, successful bidder has to mobilize proficient technical manpower along with specialized testing kits required for the same. Successful bidder to take note of this requirement and quote rate accordingly against specified items of price schedule. |
| 10.0 | QUALITY CONTROL & QUALITY ASSURANCE Successful bidder's engineers & supervisors shall be adequately qualified and also inclined to do a quality job. The quality assurance engineer shall co-ordinate all aspects of quality control, inspection, implementation of quality assurance procedures laid down in Quality Plan and technical specification by BHEL. He shall fill up quality assurance log sheets/ formats and submit to BHEL for joint inspection and acceptance. Successful bidder shall fill up, maintain & preserve the quality records in computerized media. BHEL's authorized representative shall be given free access at all time to such quality related records etc for inspection, review, etc. |
| 11.0 | QUALITY ASSURANCE PROGRAMME |
| 11.1 | Successful bidder shall arrange for suitable quality assurance programme to control all activities pertaining to the scope of work, as necessary. Such programs shall be outlined by successful bidder & shall be finally accepted by BHEL. A quality assurance programme of successful bidder shall generally cover the following |
| 11.2 | Organization structure and qualification data for key personnel of successful bidder for the management & implementation of proposed quality assurance programme. |
| 11.3 | Quality assurance program shall cover minimum following aspects. |
| 11.3.1 | System for site erection control including process controls and fabrication and assembly controls. |
| 11.3.2 | Control of non-conforming items and system for corrective actions. |

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| 11.3.3 | Inspection and test procedure for all site related works. |
| 11.3.4 | Control of calibration and testing of measuring and testing equipment. |
| 11.3.5 | System for quality audit. |
| 11.3.6 | System for indication and appraisal of inspection status. |
| 11.3.7 | System for maintenance of records. |
| 12.0 | GENERAL REQUIREMENT – QUALITY ASSURANCE |
| 12.1 | All materials, components and equipments covered under the specification shall be procured, manufactured, erected, commissioned and tested, as applicable, at all stages as per comprehensive quality assurance programme. An indicative programme for inspection/ test, to be carried out by successful bidder, for some of the major items is given in the respective technical specification. |
| 12.2 | Field quality plan will detail out the quality practices and procedures etc to be followed by successful bidder's site quality control organization, during various stages of site activities from receipt of material/ equipment at site. |
| 12.3 | BHEL reserves the right to carry out quality audit & quality surveillance of systems & procedures of successful bidder's quality management. Successful bidder shall provide all necessary assistance to enable BHEL to carry out such audit. |
| 12.4 | Quality audit/ approval of the results of test & inspection will not prejudice the right of BHEL to reject an equipment service not giving desired performance and shall not in no way limit the liabilities and responsibilities of Successful bidder in earning satisfactory performances of equipment/ service as per specification. |
| 12.5 | Repair/rectification procedure to be adopted to make any job acceptable shall be subject to the approval of BHEL. |
| 12.6 | All the latest relevant IS codes as per technical specification should be available with successful bidder at site with in 45 days from the date of placement of LOI or otherwise specified by Construction Manager/ Project Manager, BHEL. |
| 13.0 | HEALTH, SAFETY & ENVIRONMENT |
| 13.1 | It is imperative on the part of successful bidder to join and effectively contribute in joint measures such as tree plantation, environment protection, contributing towards social up-liftment, conversion of packing woods to school furniture, keeping good relation with local populace etc. |
| 13.2 | Round the clock experienced paramedical personnel with first aid facility & one ambulance including driver, fuel etc, and shall be available at site, being provided by other agency. The above facilities will be shared by various BHEL's agencies working at site (actual cost will be distributed among various BHEL's agencies at site proportionally to their contract price). The subject facility will be strengthened as per the requirement during peak work progress at site. Individual agency may co-ordinate with the supplying/ providing agency in this regard. No medical facility within/ near the site shall be provided by BHEL. In case such facility is not provided by successful bidder of this tender, BHEL will recover cost as applicable. Decision of BHEL in this regard shall be final & binding on successful bidder. |
| 13.3 | No staff quarter shall be provided by BHEL. |
| 13.4 | No borrow area for earth shall be arranged/ provided by BHEL. |
| 13.5 | Common road shall be provided by BHEL free of cost, however, temporary approaches for erection/work spots under the scope of work, as required for movement of cranes, trailers, trucks, transit mixers, dumpers, etc. shall be arranged by successful bidder at his own cost. |
| 13.6 | Successful bidder shall solely be responsible for the safety, quality, & quantity of material after it is handed over and issued to successful bidder by the BHEL. |
| 13.7 | Successful bidder shall ensure the safety of all workmen, materials and equipment either belonging to him or to others working at site. He shall observe safety rules and codes applied by the BHEL at site without exception. |
| 13.8 | Passenger lift for construction purpose should have safety cage with multiple rope, ie with safety rope & limit switch. |
| 13.9 | Safety nets with hand railings must be provided on all both inside & outside hanging platform of slip-form equipment & hanging platform from brickwork. |
| 13.10 | Emergency vehicle must be provided & kept separately as stand-by. |

| 13.11 | Non-conformity of safety rules and safety appliances will be viewed seriously and BHEL has right to impose fines on successful bidder on each incident/ each non-conformity as per details given below. | |
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| | Safety measure | Fine (Rs) |
| 13.11.1 | Not wearing safety helmet at site. | 50 |
| 13.11.2 | Not wearing safety shoes at site. | 50 |
| 13.11.3 | Not wearing safety belt while working at higher elevation | 100 |
| 13.11.4 | Not providing lifeline of safety belt | 100 |
| 13.11.5 | Not using grinding goggles while doing grinding operations | 50 |
| 13.11.6 | Not using 24V supply for lighting in confined spaces. | 500 |
| 13.11.7 | Improper earthing of welding & other electrical machines. | 500 |
| 13.11.8 | Electrical plug not used for hand machines | 100 |
| 13.11.9 | Not slinging properly | 200 |
| 13.11.10 | Using damaged slings | 200 |
| 13.11.11 | Using frayed/ broken welding cables | 200 |
| 13.11.12 | Non removal of scarp from platforms | 200 |
| 13.11.13 | Lifting cylinders without cage | 500 |
| 13.11.14 | Gas cutting without taking proper precautions or not using sheet below | 200 |
| 13.11.15 | Not maintaining electrical winches properly | 500 |
| 13.11.16 | Shorting of fuse links by thick wire | 500 |
| 13.11.17 | Over speeding of vehicles within in site premise | 200 |
| 13.11.18 | Not having valid driving license for type of vehicle being driven | 500 |
| 13.11.19 | Not having valid registration for the vehicle | 500 |
| 13.11.20 | Not providing proper barricades/ caution boards | 200 |
| 13.11.21 | Not displaying SWL on the lifting equipment | 200 |
| 13.11.22 | Sub-vendor not attending safety meeting | 1000 |
| 13.11.23 | Improper ladder for climbing up | 500 |
| 13.11.24 | Improper scaffolding arrangement | 500 |
| 13.11.25 | Engaging child labour for construction work | 1000 |
| 13.11.26 | Using domestic LPG cylinder for gas cutting/ welding operations | 500 |
| 13.11.27 | Not maintaining first aid box | 500 |
| 13.11.28 | Working without work permit/ clearance | 5000 |
| 13.11.29 | Working at height without full body harness, using non-standard/ rejected scaffolding and not arranging fall protection arrangement as required like safety rules. | 3000 |
| 13.11.30 | Unsafe handling of compressed gas cylinders (No trolley, jubilee clips double gauge regulator, improper storage/ handling etc) | 100 |
| 13.11.31 | Non-fencing of/ barricading excavated areas. | 1000 |
| 13.11.32 | Not providing shoring/ strutting/ proper slope and not keeping the excavated earth at least 1.5 mtr away from excavated area. | 5000 |
| 13.11.33 | Non display of caution board, list of hospitals, emergency services available at work locations. | 500 |
| 13.11.34 | Traffic rules violation like over-speeding of vehicle, rash driving, not using seat belts, vehicle not fitted with reverse warning alarms. | 1000 |
| 13.11.35 | Absence of successful bidder's concerned representative at site safety meeting, whenever called by BHEL/ customer. | 5000 |
| 13.11.36 | Failure to maintain safety records. | 1000 |
| 13.11.37 | Failure to conduct daily safety site inspection. HSE meeting and HSE audit at predefined frequencies. | 1000 |
| 13.11.38 | Failure to submit monthly HSE report as per stipulated schedule to BHEL. | 5000 |
| 13.11.39 | Degradation of environment (Not confining toxic spills, spilling oil/ lubricants onto ground. | 1000 |
| 13.11.40 | Not medically examining workers before allowing them to work at height, not providing ear muffs while allowing them to work in noise polluted areas, made them to work in air polluted areas without respiratory | 1000 |

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| | protective devices, etc. | |
| 13.12 | Any other nonconformity noticed not listed above will also be fined. Decision of BHEL engineer is final on the above. The amount will be deducted from running bills of successful bidder. The amount collected on the above will be cogniz for giving award to the employee who could avoid accidents by following safety rules. Also, the amount will be spent for improving the safety at site. | |
| 13.13 | Successful bidder shall also be responsible for provision of all safety notices and safety equipment required both by the relevant legislation and BHEL, as he may deem necessary. | |
| 13.14 | Successful bidder will notify well in advance to BHEL of his intention to bring any container filled with liquid or gaseous fuel or explosive or petroleum substance or such chemicals, which may involve hazards to the site. BHEL shall have the right to prescribe the conditions, under which such container is to be stored, handled and used during the performance of the works and successful bidder shall strictly adhere to and comply with such instructions. BHEL shall have the right at his sole discretion to inspect any such container or such construction plant/ equipment for which material in the container is required to be used and if in his opinion, its use is not safe, he may forbid its use. BHEL shall entertain no claim due to such prohibition and BHEL shall not entertain any claim of successful bidder towards additional safety provisions/ conditions to be provided for/ constructed as per the BHEL's instructions. | |
| 13.15 | Further, any such decision of BHEL shall not, in any way, absolve successful bidder of his responsibilities and in case, use of such a container or entry thereof into the site area is forbidden by the BHEL, successful bidder shall use alternative methods with the approval of the BHEL without any cost implication to BHEL or extension of work schedule. | |
| 13.16 | Where it is necessary to provide and/or store petroleum products or petroleum mixtures and explosives, successful bidder shall be responsible for carrying-out such provision and/or storage in accordance with the rules and regulations laid down in Petroleum Act 1934, Explosives Act, 1948, and Petroleum and Carbide of Calcium Manual published by the Chief Inspector of Explosives of India. All such storage shall have prior approval of the BHEL. In case, any approvals are necessary from the Chief Inspector (Explosives) or any statutory authorities, successful bidder shall be responsible for obtaining the same. | |
| 13.17 | All equipment used in construction and erection by successful bidder shall meet Indian/ International Standards and where such standards do not exist, successful bidder shall ensure these to be absolutely safe. All equipments shall be strictly operated and maintained by successful bidder in accordance with manufacturer's operation Manual and safety instructions and as per Guidelines/ rules of BHEL in this regard. | |
| 13.18 | Periodical examinations and all tests for all lifting/ hoisting equipment & tackles shall be carried-out in accordance with relevant provisions of Factories Act 1948, Indian Electricity Act 1910 and associated laws/ rules in force from time to time. A register of such examinations & tests shall be properly maintained by successful bidder and will be promptly produced as & when desired by BHEL or by the person authorized. | |
| 13.19 | Successful bidder shall be fully responsible for safe storage of his and his sub-vendor radioactive sources in accordance with BARC/ DAE (Bhabha Atomic Research Center/ Department of Atomic Energy, Govt of India) rules and other applicable provisions. All precautionary measures stipulated by BARC/ DAE in connection with use, successful bidder would take storage and handling of such material. | |
| 13.20 | Successful bidder shall provide suitable safety equipment of prescribed standard to all employees and workmen according to the need, as may be directed by BHEL who will also have right to examine these safety equipments to determine their suitability, reliability, acceptability and adaptability. | |
| 13.21 | Where explosives are to be used, the same shall be used under the direct control | |

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| | and supervision of an expert, experienced, qualified and competent person strictly in accordance with the Code of Practices/ Rules framed under Indian Explosives Act pertaining to handling, storage and use of explosives. |
| 13.22 | Successful bidder shall provide safe working conditions to all workmen and employees at the Site including safe means of access, railings, stairs, ladders, scaffoldings etc. The scaffoldings shall be erected under the control and supervision of an experienced and competent person. For erection, successful bidder only shall use good and standard quality of material. |
| 13.23 | Successful bidder shall not interfere or disturb electric fuses, wiring and other electrical equipment belonging to BHEL or other agencies under any circumstances, whatsoever, unless expressly permitted in writing by BHEL to handle such fuses, wiring or electrical equipment. |
| 13.24 | Before successful bidder connects any electrical appliances to any plug or socket belonging to the other contractor or BHEL, he shall fulfill following. |
| 13.24.1 | Satisfy BHEL that the appliance is in good working condition. |
| 13.24.2 | Inform BHEL of the maximum current rating, voltage and phases of the appliances. |
| 13.24.3 | Obtain permission of BHEL detailing the sockets to which the appliances may be connected. |
| 13.25 | BHEL will not grant permission to connect until following are complied with. |
| 13.25.1 | The appliance is in good condition and is fitted with suitable plug; |
| 13.25.2 | The appliance is fitted with a suitable cable having two earth conductors, one of which shall be an earthed metal sheath surrounding the cores. |
| 13.26 | No electric cable in use by successful bidder/ BHEL will be disturbed without prior permission. No weight of any description will be imposed on any cable and no ladder or similar equipment will rest against or attached to it. |
| 13.27 | No repair work shall be carried out on any live equipment. BHEL must declare the equipment safe and a permit to work shall be issued by BHEL before successful bidder carries out any repair work. While working on electric lines/equipments whether live or dead, suitable type and sufficient quantity of tools will have to be provided by successful bidder to electricians/ workmen/ officers. |
| 13.28 | Successful bidders shall employ necessary number of qualified, full time electricians/ electrical supervisors to maintain his temporary electrical installations. |
| 13.29 | Successful bidder shall employ trained safety officer to supervise day to day safety aspects of the equipments and workmen, who will co-ordinate with BHEL safety officer. In case of work being carried out through sub-vendor, sub-vendor's bidder's workmen/ employees will also be considered as successful bidder's employees/ workmen for the above purpose. |
| 13.30 | Name & address of such safety officer of successful bidder to be promptly informed in writing to BHEL with a copy to safety officer-In charge before he starts work or immediately after any change of the incumbent is made during currency of contract. |
| 13.31 | In case any accident occurs during the construction/ erection or other associated activities undertaken by successful bidder thereby causing any minor or major or fatal injury to his employees due to any reason, whatsoever, it shall be the responsibility of successful bidder to promptly inform the same to BHEL in prescribed form and also to all the authorities envisaged under the applicable laws. |
| 13.32 | BHEL shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and/ or property, and/ or equipments. In such cases, successful bidder shall be informed in writing about the nature of hazards and possible injury/ accident and he shall comply to remove shortcomings promptly. |
| 13.33 | Successful bidder shall not be entitled for any damages/ compensation for stoppage of work due to safety reasons above and the period of such stoppage of work will not be taken as an extension of time for completion of the facilities and will not be the ground for waiver of levy of penalty. |
| 13.34 | Successful bidder shall follow and comply with all safety rules of BHEL, relevant provisions of applicable laws pertaining to the safety of workmen, employees plant and equipment as may be prescribed from time to time without any demur, protest |

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| | or contest or reservation. In case of any inconformity between statutory requirement and Safety Rules of BHEL referred above, the later shall be binding on successful bidder unless the statutory provisions are more stringent. | |
| 13.35 | In case BHEL is made to pay such compensation then successful bidder is liable to reimburse BHEL such amount in addition to compensation indicated above. | |
| 13.36 | These insurance covers have to be taken prior to start of his work at subject project and he shall make available the Policy to Construction Manager, BHEL for necessary verification before commencement of work. However, irrespective of such verification/ acceptance, sole responsibility to maintain adequate insurance cover for his workmen, T&P, assets etc at all times during the period of contract shall lie with successful bidder. Regarding aforesaid insurance cover, successful bidder shall directly deal with Insurance Company for all matters regarding the insurance in his scope. | |
| 13.37 | If successful bidder does not take all safety precautions and/or fails to comply with the Safety Rules as prescribed by BHEL or under the applicable law for the safety of the equipment and plant and for the safety of personnel and successful bidder does not prevent hazardous conditions which cause injury to his own employees or employees of other successful bidders, or BHEL's employees or any other person who are at site or adjacent thereto, successful bidder shall be responsible for payment of compensation to employer as per the following schedule. | |
| 13.37.1 | Fatal injury or accident causing death | Rs.2,00,000 per person or as per HSE manual whichever is higher. |
| 13.37.2 | Major injuries or accident causing 25% or more permanent disablement to workmen or employees. | Rs 50,000 per person or as per HSE manual, whichever is higher. |
| 13.38 | In case of imposition of any penalty on BHEL by Customer or any authority for reasons attributable to the contractor, the same shall be deducted on back to back basis. | |
| 14.0 | SPECIFIC REQUIREMENTS FOR ISO 9002 | |
| 14.1 | Successful bidders shall ensure that all his staff/ employees are exposed to periodical training programmes conducted by qualified agencies/ personnel on ISO 9002 Standards. | |
| 14.2 | Successful bidder shall ensure that the quality is maintained in all the works connected with this contract at all stages of the requirement of BHEL. | |
| 14.3 | Successful bidder shall ensure that all MMDs that are used, whether owned by successful bidders or used on loan, are calibrated by the authorized agencies and the valid calibration certificate will be available with them for verification by BHEL. A list of such instruments possessed by successful bidder at site with its calibration status is to be submitted to BHEL Engineer for control. | |
| 14.4 | Successful bidder shall ensure that fitness certificate of tools & plants, those are in use, whether owned by successful bidder or issued on loan, are tested by authorised agency and valid fitness certificate is available for verification by BHEL. | |
| 14.5 | Successful bidders shall arrange for the inspection of the works at various stages as required by BHEL. Successful bidders shall take immediate corrective action for the non-conformances if any, observed and pointed out by BHEL. | |
| 15.0 | CIVIL WORKS, FOUNDATIONS AND GROUTING | |
| 15.1 | Foundations for all equipment shall be provided by BHEL. The dimensions and locations of the foundations, pockets, and anchor bolt shall be checked by successful bidder for their correctness as per drawings. Further, top elevation of foundations shall be checked with respect to bench marks, etc. All minor adjustments of foundation level, dressing and chipping of foundation surfaces up to 50 mm, enlarging the pockets in foundations, etc as may be required for erection of equipment/ plants shall be carried out by successful bidder within the quoted/ accepted rates/ price. | |
| 15.2 | While on the job, care is essential to avoid too much chipping and resultant lowering of level. In case of excess chipping successful bidder has to arrange | |

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| | additional packing plates as per requirements provided it is allowed by BHEL engineer. When required by manufacturers, the embedded sub-sole plates shall be scraped and checked with Prussian blue to get the required contact with frames. |
| 15.3 | Successful bidder shall ensure perfect matching of packer plates including scraping and blue matching with foundation by dressing the foundation, as well as perfect matching between the packer plates and the base plate of equipment to the satisfaction of BHEL engineer. |
| 15.4 | All civil works, viz grouting/ excavation/ casting of foundation anchor points for derricks, winches, guy ropes, fastening, etc and foundations required for any other temporary supports/ works, as required for safe & efficient operation of tools & tackles, shall be successful bidder's responsibility. For these civil works all materials excluding cement and required facilities will have to be arranged by successful bidder at their own cost. |
| 15.5 | All minor civil works for main equipment including drilling, chipping, enlarging cutouts, foundation pockets, cable cut outs, etc will have to be carried out by successful bidder at no extra cost. Grouting of equipments erected by successful bidder as per procedure is included in the scope. Materials like cement, sand aggregates, etc including shuttering, curing, etc shall be arranged by successful bidder without any extra cost. |
| 16.0 | CLEANLINESS |
| 16.1 | Successful bidder shall be responsible for keeping the entire area allotted to him clean & free from rubbish, debris, etc during the period of contract. Successful bidder shall employ enough number of special personnel to thoroughly clean his work-area at least once in a day. All such rubbish & scrap material shall be stacked or disposed in a place to be identified by BHEL/ customer. Materials and stores shall be so arranged to permit easy cleaning of area. In areas where equipment might drip oil and cause damage to floor surface, a suitable protective cover of a flame resistant, oil proof sheet shall be provided to protect floor from such damage. |
| 16.2 | Similarly, labor colony, the offices and the residential areas of successful bidder's employees and workmen shall be kept clean and neat to the entire satisfaction of BHEL/ customer. Proper sanitary arrangements shall be provided by successful bidder, in the work-areas, office and residential areas of successful bidder. |
| 16.3 | Bidders to note that following. |
| 16.3.1 | 1 no experienced paramedical personnel with first aid facility at site is a must. No medical facility within/ near the site shall be provided by BHEL. |
| 16.3.2 | No staff quarter shall be provided by BHEL. |
| 16.3.3 | Successful bidder shall solely be responsible for safety, quality & quantity of material after it is handed over and issued to successful bidder by BHEL. |
| 17.0 | OTHER FACILITIES TO BE PROVIDED BY SUCCESSFUL BIDDER |
| 17.1 | All tools & tackles, machinery, equipment, instruments, etc, unless otherwise specified in the tender, required for work have to be arranged by successful bidder including its transportation to & from site, and including storage, insurance etc. |
| 17.2 | All tools & tackles to be deployed by successful bidder for the work shall have the prior approval of BHEL with regard to brand, quality and specification. |
| 17.3 | Successful bidder shall provide all necessary scaffolding materials, temporary structures, as may be required and necessary safety devices etc. |
| 17.4 | Successful bidder's responsibility with regard to operator, fuel, lubricants and daily upkeep of T&Ps provided by BHEL is further detailed in relevant section. |
| 17.5 | Timely deployment of adequate quantity of T&P is the responsibility of successful bidder. Successful bidder shall be prepared to augment the T& P at short notice to match the planned program and to achieve the milestones. |
| 17.6 | Successful bidder shall maintain & operate his tools & plants in such a way that major breakdowns are avoided. In the event of major breakdown, successful bidder shall make alternative arrangements expeditiously so that progress of work is not hampered. |
| 17.7 | The T&P to be arranged by successful bidder shall be in proper working condition and their operation shall not lead to unsafe condition. Movements of cranes, and |

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| | other equipment should be such that no damage/ breakage occurs to foundations, other equipment, material, property and men. All arrangements for movement of the T&P, etc, shall be successful bidder's responsibility. Valid test certificate of all the applicable T&Ps are required to be produced at the time of deployment. |
| 17.8 | Successful bidder shall arrange adequate nos of wooden sleepers/ steel plates for compaction of approach for crane movement and material stacking near work site. |
| 17.9 | For welding, use of welding generators/ rectifiers only is permitted. |
| 17.10 | Successful bidder at his cost shall carry out periodical testing of his construction equipments and calibration of measuring instruments (MMDs) and tests. Test/ calibration certificates shall be furnished to BHEL. MMDs shall be calibrated only at accredited laboratory as per list available with BHEL or any other laboratory approved by BHEL. |
| 17.11 | Temporary toilet blocks are to be constructed/ fabricated at different areas as per mutual agreement for maintaining proper sanitation. |
| 17.12 | Construction and maintenance of necessary approach & access roads surrounding the work area shall be in the scope of successful bidder within accepted rates. |
| 18.0 | RESPONSIBILITIES WITH REGARD TO EMPLOYMENT OF LABOUR, ETC |
| 18.1 | Successful bidder shall comply with the requirements of local authorities/ project authorities calling for police verification of antecedents of the workmen, staff, etc. |
| 18.2 | BHEL/ customer may insist for witnessing the regular payment to the labour. They may also like to verify relevant records for compliance with statutory requirements. Successful bidder shall enable such facilities to BHEL/ customer. |
| 18.3 | It is the responsibility of successful bidder to arrange gate pass for all his employees, T&P, etc for entering the project premises. Necessary co-ordination with customer officials is the responsibility of successful bidder. Successful bidder to follow all procedures laid down by customer for making gate pass. To work beyond normal working hours, successful bidder shall arrange necessary work permits for working beyond normal working hours. |
| 18.4 | If at any time during the execution of work, it is noticed that the work is suffering on account of non-availability/ shortfall of resources from successful bidder's side, BHEL will make suitable alternate arrangements at successful bidder's risk & cost. |
| 18.5 | It is the responsibility of successful bidder to engage his workmen in shifts and or on overtime basis to achieve targets, to suit BHEL's commitments to customer or to adjust date of completion of events or due to other reasons. Decision of BHEL in this regard will be final & binding on successful bidder. |
| 18.6 | Successful bidder shall deploy only qualified & experienced engineers/ supervisors. They shall have professional approach in executing the work. |
| 18.7 | Successful bidder's supervisory staff shall execute the work in the most professional manner in the stipulated time. Accuracy of work and aesthetic finish are essential part of this contract. They shall be responsible to ensure that workmanship conform to dimensions & tolerances given in drawings/ instructions given by BHEL engineer from time to time. |
| 18.8 | The supervisory staff employed by successful bidder shall ensure proper outturn of work and discipline on the part of labour put on the job. Also in general they should see that the works are carried out in a safe and proper manner and in coordination with other labour and staff employed directly by BHEL or other successful bidders of BHEL or BHEL's client. |
| 18.9 | If at any time, it is found that successful bidder is not in a position to deploy required engineers/ supervisors/ workmen due to any reason, BHEL shall have the option to make alternate arrangements at successful bidder's risk & cost. |
| 19.0 | METHOD OF MEASUREMENT |
| 19.1 | Mode of measurement shall be as per relevant clauses of this tender. In case the same is not available the relevant IS, standard procedure adopted in CPWD shall be adopted. In case the same is also not available in CPWD, measurement of the work done will be based on the mutual agreement between BHEL and successful bidder. In all the above cases, interpretation of BHEL will be final & binding to successful bidder. |

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| 19.2 | Where the payment is made on the basis of item rate, actual executed quantity measured jointly shall only be paid for. |
| 19.3 | BHEL's decision regarding stage of payment corresponding to progress of work, calculation of weight, etc will be final & binding on successful bidder. |
| 20.0 | AS BUILT DRAWING Successful bidder shall submit as-built drawing to BHEL/ customer after completion of work for acceptance/ approval. Successful bidder will be given 1 copy of working drawing based on which as-built drawing is to be prepared. |
| 21.0 | PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT To meet the need of construction management at site, successful bidder shall provide the following services within accepted rates. |
| 21.1 | PLANNING & MONITORING |
| 21.1.1 | Successful bidder shall prepare detail construction schedule (L-2/ L-3) as per completion dates given in this document. This schedule must include all milestone and key activities for each sub-system/ component in the areas of engineering (wherever applicable), procurement, manufacture (wherever applicable), ecogniz, excavation/ construction/ erection. This network must conform to the overall project schedule. The bidder should also ensure monitoring of these activities at least weekly basis to start with and on daily basis whenever required by BHEL. |
| 21.1.2 | Successful bidder shall prepare progress report indicating progress on key activities, management summary for critical activities, list of actions requiring attention of BHEL. This schedule is to be made in PRIMAVERA software, so that the same is compatible with BHEL's project management software. |
| 21.1.3 | Successful bidder will have to establish computerized project management system and the install adequate nos. of latest computer facility for their own usage at site. |
| 21.2 | INFRASTRUCTURE |
| 21.2.1 | Successful bidder shall install 2 nos all in one PCs (multimedia PC work station Core-i3, 2.1 GHz or above, 500 GB HDD, 4 GB RAM, 100/ 1000 MBPS LAN card) of HP/ Compaq/ Lenevo or equivalent make with window 8 or 7 O/S and required software like MS Office 2010 Professional, AutoCAD 2009 or higher, PageMaker (7.0, etc), ADOBE PDF CREATOR with one no laser jet printer compatible for A3 size printing (ink/ cartridge for which to be supplied as & when required), one no laser jet printer compatible for A4 size printing (ink/ cartridge for which to be supplied as & when required) with power backup at places, as per instruction of BHEL for exclusive use of BHEL. These computers/ printers shall remain successful bidder's property and they will be allowed to take out the same after completion of original contract period. Successful bidder shall provide data/ information, etc in prescribed formats for periodical updating of progress reports, material management reports, updating of network pertaining to successful bidder's scope of work, etc Successful bidder shall provide 1 no computer operator and 1 number service staff for miscellaneous service for BHEL's use at site/ Kolkata for reconciliation, progress review & day-to-day planning purpose, documentation, etc. These facilities are to be provided within 15 days from date of start date till completion of scheduled contract period, including extension, if the reason for extension is attributable to successful bidder. If case successful bidder fail to provide computer/ printer or personnel as per requirement, for a continuous period of fifteen days or more, BHEL shall have the right to deduct as per following rates on prorated basis, from successful bidder's RA bill or any other dues. |
| 21.2.1.1 | @ Rs 15,000/- (Fifteen thousand) per month for each computer operator or at actual rate +30%, whichever is lower. |
| 21.2.1.2 | @ Rs 10,000 (Ten thousand) per month for each computer with printer or at actual rate +30%, whichever is lower. |
| 21.2.1.3 | @ Rs 12,000/- (Twelve thousand) per month for each service staff or at actual rate +30%, whichever is lower. |
| 21.2.2 | In case BHEL extends the service of computer with printer, computer operator or |

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| | service staff beyond the aforesaid mandatory period, successful bidder shall extend the service to BHEL, for which BHEL will reimburse following rates. | |
| 21.2.2.1 | @ Rs 11,000/- (Eleven thousand) per month for each computer operator or at actual rate +30%, whichever is lower. | |
| 21.2.2.2 | @ Rs 8,000 (Eight thousand) per month for each computer with printer or at actual rate +30%, whichever is lower. | |
| 21.2.2.3 | @ Rs 9,000/- (Nine thousand) per month for each service staff or at actual rate +30%, whichever is lower. | |
| 21.2.3 | Successful bidder's site office must have facilities of communications like Fax, E-mail, and telephone with STD facility within a month from LOI. | |
| 21.3 | PROGRESS REPORTING | |
| 21.3.1 | The bidder shall submit daily, weekly and monthly progress reports for work force, materials reports, consumables (gases/electrodes) report and other reports as per pro-forma considered necessary by the BHEL. In case of any failure on successful bidder's part to comply with this, BHEL may at its discretion, consider to withhold part payment against their RA bills. | |
| 21.3.2 | The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which 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 the slippages do not accumulate and effect the overall program. | |
| 21.3.3 | The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged. | |
| 21.3.4 | 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, successful bidder shall present program of subsequent week. Successful bidder shall constantly update/revise their work program to meet the overall requirement. | |
| 21.3.5 | 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 successful bidder and will be used as a forum for discussing all areas where progress needs to be speeded up. Successful bidder shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings. | |
| 21.3.6 | During construction, successful bidder shall take an average forty colour digital photograph/ slides each month (not less than nine per week) of the works during progress. In case of failure in providing such photograph in each month, an amount of Rs. 20,000 per month shall be deducted from successful bidder's RA bill. | |
| 21.3.7 | Successful bidder have to provide for electronic/ computerized storing and reproduction/ printing/ plotting of various data, log sheets, protocols, measurements etc. These may be stored in CD (as per requirement) and handed over to BHEL as per requirement. | |
| 21.4 | SITE ORGANIZATION | |
| 21.4.1 | 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 Site Incharge for site operations with sufficient level of authority to take site decisions. 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 the schedule without any commercial implication to BHEL. The organization chart is to be submitted within 10 days from the date of LOI. | |
| 21.4.2 | Following (minimum) engineering manpower with power plant construction background to be deployed at site by successful bidder for proper execution. | |
| 21.4.2.1 | Qualified safety officers with assistants (exclusive for safety supervision for project jobs). | As per relevant HSE clause/ |

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| | | manual. |
| 21.4.2.2 | For planning function of entire scope of work. | 1 no with sufficient experience. |
| 21.4.2.3 | For quality inspection function of entire scope. | 1 no engineer. 1 no supervisor. |
| 21.4.2.4 | Material handling area for follow-up with BHEL for timely putting up material requirement, identification of material for receipt from BHEL store/ storage yard, etc for various systems, ie transformer, busduct, cable tray, vable, switchgear, panel, etc. | 1 no engineer. 1 no supervisor. |
| 21.4.2.5 | For site execution of various areas. | 2 no engineer. 4 nos supervisor. |
| 21.4.3 | Deputation of above man-power shall be jointly decided at site in line with construction schedule. | |
| 21.4.4 | Engineer/ supervisor for other functions like store & purchase, material management, planning, finance, administration, etc are to be provided as per site requirement and not considered above. | |
| 21.4.5 | In the event of non deputation of engineer/ supervisor by the bidder as per above agreed schedule, BHEL shall reserve the right to deduct Rs 50,000 per man-month for engineer, Rs 35,000 per man-month for the supervisor/ safety officer/ safety supervisor/ chemist from RA bills. Further induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement without any financial implication. | |
| 21.4.6 | BHEL reserves the right to reject or approve the list of personnel proposed by 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. | |
| 21.4.7 | In addition to above, a well experienced qualified engineer to be designated, as 'Project Co-ordinator', shall be deployed by successful bidder. Such engineer shall have adequate exposure on the job and shall remain fully involved in all planning activities, guidance etc to successful bidder's own team during the complete execution period of contract. | |
| 21.4.8 | 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. | |
| 21.4.9 | Successful bidder should also submit network programs for the erection of various items. These networks shall show BHEL/ customer hold points (CHP), which have to be cleared by BHEL/ customer, or their authorized representatives before further erection can take place. These programs for the erection would clearly identify responsibilities of successful bidder and BHEL/ customer. It is the responsibility of successful bidder to get the networks approved by BHEL within four weeks of the date of finalization of award of work/ placement of LOI. | |
| 21.5 | CONSTRUCTION MANAGEMENT | |
| 21.5.1 | Based on the approved program, successful bidder shall submit a program of construction/ erection/ commissioning for the implementation. These programs would be amplified showing start of erection and subsequent activities and shall form the basis for site execution and detail monitoring. The three monthly rolling program with the first month's program being tentative based on the site condition would be prepared based on these programs. Successful bidder shall also be involved along with BHEL/ customer to tie up detailed resources mobilization plan over the period of the contract matching with the performance targets. | |
| 21.5.2 | The program would be jointly finalized by Site Incharge of successful bidder with BHEL/ customer as well as the site-planning representative. The erection program will also identify sequential events matching financial turnover. | |
| 21.5.3 | Successful bidder is liable to furnish all documentary evidences towards payment of Works Contract Tax as and when required by BHEL. | |

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| 22.0 | LAND |
| 22.1 | Land will be provided free of cost by BHEL to the extent available/ considered necessary by BHEL to successful bidder for their office, store, within plant premises. Availability of land within plant boundary is very limited and successful bidder have to plan & use existing land considering use of land by other civil/ mechanical/ electrical successful bidders and storage of plant machineries & materials. The existing land shall be shared by all agencies. |
| 22.2 | Successful bidder shall arrange at his own cost cleaning and grading of area allotted, construction of their temporary office, stores, godown, fabrication yards etc and also the watch & ward, etc. |
| 22.3 | Successful bidder shall make their own arrangement for construction & maintenance of approach road from the common approach road, for their site office, stores, working area, etc. |
| 22.4 | Land, as available, may be provided for labour colony outside plant boundary, free of cost. Successful bidder should visit the site to assess site condition regarding feasibility of use of land for the purpose. The successful bidder to construct temporary labour colony/ hutment as per requirement, after obtaining approval of formalities from statutory body. |
| 22.5 | Successful bidder shall provide adequate no of Indian type toilet in their labour colony. |
| 22.6 | On completion of work, all the temporary buildings, structures, pipelines, cables, etc, shall be dismantled & leveled and debris shall be removed as per instruction of BHEL by successful bidder at their cost. In the event of failure to do so, same will be removed and expenditure thereof will be recovered from successful bidder. Decision of BHEL in this regard shall be final & binding. However, the scope of dismantling & leveling the area is limited only to successful bidder's site office, yard and other spaces occupied by successful bidder. |
| 23.0 | WATER |
| 23.1 | BHEL will provide construction as well as potable water at one strategic point within plant premises, free of cost, to the successful bidder for their site office, store. Till such time, construction water facility is not ready, successful bidder have to make their own arrangement for construction & drinking water. |
| 23.2 | Further network for construction & potable water system for construction work shall be arranged by successful bidder at their own cost. |
| 23.3 | BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of water supply and successful bidder shall claim no compensation for delay in work for such interruption. Successful bidder may make standby arrangement for water for which no separate payment shall be made by BHEL. |
| 23.4 | Successful bidder will have to arrange for storage of water to meet day-to-day requirement. |
| 23.5 | Availability of water (construction as well as potable) in project site is limited. Successful bidder shall ensure that no water is wasted and shall take all necessary measures for any wastage & preservation of water. In this context, for proper utilisation & to avoid scarcity, successful bidder shall mandatorily construct storage facility of construction & potable water at site (Near work places). Any deviation from this shall lead to forthwith withdrawal of the facility. |
| 23.6 | Potable water, as available, may be provided for labour colony outside plant boundary, free of cost. Successful bidder should visit site before quoting to assess site condition regarding feasibility of use of water source for the purpose. Further network for drinking water system for construction work shall be arranged by successful bidder at their own cost. Successful bidder shall take care of all precautions to avoid any sort of misuse, wastage of water. Any deviation from this shall lead to forthwith withdrawal of this facility. |
| 23.7 | Successful bidder shall take care of all precautions to avoid any sort of misuse, wastage of water. Any deviation from this shall lead to forthwith withdrawal of the facility. |
| 23.8 | Successful bidder shall make their own arrangement of service water facility for |

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| | labour colony, at their own cost. |
| 24.0 | ELECTRICITY |
| 24.1 | <p>BHEL will provide construction power free of charges at 415 V level at one/ two strategic point(s) within plant premises. Successful bidder shall make their own distribution arrangement to draw electricity.</p> <p>General illumination system shall be provided by BHEL. However, provision of suitable temporary lights at different floors/ working areas for execution of the work & safety of workmen shall be provided by successful bidder, within accepted rate. Illumination should be such that minimum illumination requirement as specified by Indian Standards for general illumination is maintained.</p> |
| 24.2 | If any other voltage level (other than normally available) is required, the same shall be arranged by successful bidder from power supply as above. Successful bidder will have to provide at their own cost necessary calibrated energy meters (tamper proof, suitably housed in a weather proof box with lock & key arrangement) at point of power supply along with calibration certificate from authorized/ accredited agency for working out the power consumption. In case of recalibration required for any reason, necessary charges including replacement by calibrated meters is to be borne by successful bidder. Supply of electricity shall be governed by Indian Electricity Act and Installation Rules and other Rules & Regulation as applicable. In case of any major deviation from normally accepted norms is observed, BHEL will reserve the right to impose penalty as deemed fit for such cases. |
| 24.3 | Successful bidder shall have to provide earth leakage circuit breaker at each point wherever human operated electrical drives/ T&Ps are deployed. |
| 24.4 | The power supply will be from the available grid. BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of power supply/ variation in voltage level and no compensation for delay in work can be claimed by the successful bidder due to such non-supply on the grounds of idle labour, machinery or any other grounds. |
| 24.5 | Successful bidder shall arrange sufficient illumination at their own work areas. |
| 24.6 | Successful bidder should ensure that the work in critical areas is not held up in the event of power breakdown. In the event of breakdown in the electric supply, if the progress of work is hampered, it will be the responsibility of the successful bidder to step up the progress of work after restoration of electric supply so that overall progress of work is not affected. |
| 24.7 | Successful bidder has to make arrangement at their own cost for illumination for their working area for execution of the work & safety of workmen. |
| 24.8 | Though the construction power is provided free of charge, it is the responsibility of the successful bidder to ensure efficient utilization of electricity. Suitable audit shall be carried out jointly by BHEL & successful bidder on a periodic basis to ensure the same. In case at any point of time it is found that construction power is being used inefficiently or for any other purpose than the intended use, the successful bidder will be suitably penalized as per the provision of the contract. The maximum penalty that can be imposed on the successful bidder shall be limited to one month's electricity charges (as will be obtained from the energy meter point) per incident of inefficient use or misuse. |
| 24.9 | Successful bidder shall make their own arrangement of electricity for labour colony. BHEL shall not provide electricity for labour colony of successful bidder. |
| 25.0 | CONSTRUCTION OF TEMPORARY OFFICE, STORES, ETC |
| | Successful bidder, at their own cost, shall arrange cleaning of allotted area, construction of their temporary office, stores, etc and also watch & ward thereof. |
| 26.0 | CONSUMABLE |
| 26.1 | Successful bidder shall provide within accepted rates/ price, all consumables like welding electrodes, cleaning agents, etc as necessary for such work. |
| 26.2 | It shall be responsibility of 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 |

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| | progress or for additional claim. |
| 26.3 | BHEL reserve the right to reject use of any consumable, like electrode, gas, lubricant/ special consumables, etc, if it is not found to be of required standard/ make, purity. |
| 26.4 | It shall be responsibility of successful bidder to obtain prior approval of BHEL regarding suppliers, type, etc, before procurement of welding electrode, TIG wire. On receipt of electrode at site, these shall be subjected to inspection & approval by BHEL. Successful bidder shall inform BHEL in details regarding type of electrodes, batch no, date of expiry, etc and produce test certificate for each lot/ batch with correlation of batch/ lot no with respective test certificate. No electrode will be allowed to be used without valid test certificate. |
| 26.5 | Shortage of any of the above electrodes/ filler wire or the equivalent suggested by BHEL shall not be quoted as reason for deficiency in progress or for additional rate. |
| 26.6 | All electrodes shall be dried in electrode drying oven to the temperature & period specified by BHEL or as mentioned in WPs before they are used in erection work and each welder should be provided with one portable electrode drying oven at work spot. Electrode drying oven and portable drying ovens shall be provided by successful bidder at their cost. |
| 26.7 | The electrode drying oven shall have thermometer for temperature indication. The thermostat and thermometer of oven shall be calibrated before use and also periodically as advised by BHEL and calibration test certificates (from authorised/ Govt approved/ accredited test house traceable to National/ International standards) will be submitted by successful bidder at their cost. |
| 26.8 | BHEL reserve the right to reject use of any electrode, filler wire or any other consumable at any stage, if found defective because of bad quality, improper storage, expiry date, unapproved make, etc. It shall be responsibility of successful bidder to replace the same without additional cost & time. |
| 26.9 | In case of improper arrangement for procurement of any consumables, BHEL reserve 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 (30% at present). Postponement of such recovery is normally not permitted. Decision of BHEL in this regard is final & binding on the successful bidder. |
| 27.0 | MEASURING AND MONITORING DEVICE (MMD) |
| 27.1 | Successful bidder shall provide within accepted rates/ price, all MMDs as necessary for such work. |
| 27.2 | Successful bidder shall ensure deployment of reliable & calibrated MMD. The MMDs shall have test calibration certificate from authorized/ Govt approved agencies. Successful bidder shall also keep provision of alternate engagement for such MMDs so that the work does not suffer when a particular MMD is sent for calibration. Re-testing/ re-calibration shall also be arranged by successful bidder at their own cost at regular interval during the period of use as advised by BHEL. |
| 28.0 | TOOLS & PLANTS TO BE PROVIDED BY BHEL ON SHARING BASIS |
| 28.1 | T&P as per relevant annexure of this volume of tender will be provided by BHEL to successful bidder free of any charges on sharing basis as per availability. The T&Ps shall be shared by various other successful bidders and successful bidder shall plan his activities accordingly in co-ordination with BHEL site engineers. |
| 28.2 | Successful bidder shall ensure that T&Ps provided to them is kept in good running condition, all along its use by them and after use, it is returned to BHEL in good condition. BHEL's decision regarding condition evaluation shall prevail. |
| 28.3 | Depending on availability, the cranes may be provided to successful bidder free of any charges. The cranes shall be shared by various other successful bidders and successful bidder shall plan their activities accordingly in co-ordination with BHEL site engineers. Required fuel for crane including mobil, grease, other consumables required for crane operation shall also be provided by BHEL free of charge. In the normal working hours, crane operator (along with helper, if any) will be provided by BHEL on free of cost basis. In the event, the deployed BHEL crane is used by |

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| | successful bidder beyond 8 hours (In single/ multiple operation) in a day (working day/ holidays), successful bidder have to deploy their own operator & helper for crane operation during these extended hours. In case proficiency of successful bidder's crane operator is not found satisfactory for safe operation of the crane, BHEL's crane operator will be engaged for operation and in such case, successful bidder has to bear overtime charges of BHEL's crane operator (alongwith helper, if any) as per BHEL's standard charges. BHEL's decision in this regard will be final after judging the proficiency of successful bidder's crane operator. |
| 28.4 | Any damage/ breakdown maintenance of T&Ps arising out of improper handling by successful bidder shall be to the account of successful bidder. BHEL reserve the right to repair the same to its own satisfaction at successful bidder's cost. During such outage of T&P, BHEL shall not be responsible to provide any alternative. Successful bidder shall arrange for such alternative arrangement at their own cost. |
| 28.5 | Successful bidder shall return BHEL, T&Ps issued to them in good working condition as & when desired by BHEL (on completion or reduction of work load). If return of equipment is delayed by successful bidder, hire charges as applicable shall be levied by BHEL from time it was requisitioned till the time of actual return. Hire charges shall also be charged on T&P returned in damaged/ un-serviced condition to BHEL till its satisfactory repair. Equipment returned in damaged un-serviced condition shall be got repaired by BHEL at their discretion and entire cost of repair with BHEL overheads shall be recovered from successful bidder. |
| 28.6 | In case of any T&P (issued to successful bidder) remain idle without valid reason, BHEL shall withdraw the T&P immediately for allotment to other agency next in priority and no compensation shall be entertained on this account by BHEL. |
| 28.7 | The T&Ps will be issued on sharing basis and distribution of these shall be done at the discretion of Construction Manager, BHEL as per requirement/ priority of the job and availability of these items. In the event of non-availability of crane, BHEL may explore the possibility of providing alternate higher/ nearby capacity crane, found sparable with BHEL site. However, this is not a binding for BHEL. Such cranes of higher capacity (if provided by BHEL) will also be issued on same conditions as applicable to cranes listed in the relevant annexure. |
| 28.8 | In the event of any damage or theft occurring to the issued T&Ps, while in use with successful bidder, due to their negligence, the same shall be repaired/ replaced by successful bidder at their own cost within the time stipulated by Construction Manager, BHEL. Successful bidder's failure to do so shall entitle BHEL to get the above done through any agency and cost alongwith overheads shall be recovered from successful bidder's RA bill. |
| 28.9 | The items mentioned in relevant annexure are for general guidance only. Except the referred items, successful bidder has to deploy all other T&Ps required for proper & satisfactory completion of the job. |
| 28.10 | Increasing/ shortening of crane boom to suit work requirements shall have to be arranged by successful bidder at their cost. In case of non-availability of T&Ps to be provided by BHEL due to any reason, successful bidder shall plan/ amend/ alter their activities to meet erection/ commissioning targets in consultation with BHEL. No additional compensation will be given for this. |
| 28.11 | Normal/ schedule maintenance of T&P issued to successful bidder on shared basis shall be carried out by BHEL as per requirement. Successful bidder shall plan/ alter their activities in line with availability of cranes, issued by BHEL on sharing basis. |
| 28.12 | Actual use of T&P including marching as per entry in log-book duly certified by BHEL engineer shall be considered for calculation of overtime charges. |
| 28.13 | T&P issued shall be used only for designated scope of work as per direction of BHEL. |
| 28.14 | In the event successful bidder does not use and/ or maintain BHEL T&P according to BHEL's instructions, BHEL reserve the right to withdraw such T&P without any notice and no claim in this regard shall be entertained and successful bidder shall be responsible for delay in execution on this account. |
| 28.15 | It shall be responsibility of successful bidder to take delivery of T&P from stores or |

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| | place of use of T&P by other agencies at project site, transport the same to site and return the same to BHEL store/ place as intimated by BHEL at project site in good working conditions after use. |
| 28.16 | EOT CRANE |
| 28.16.1 | EOT crane shall be made available to successful bidder in TG hall free of charges for erection purpose as per availability on shared basis. As the operator will be from other agency, successful bidder will do necessary co-ordination. |
| 28.16.2 | Availability of EOT crane may be affected from time to time due to routine preventive maintenance or break down maintenance. Successful bidder have to make alternative arrangement or plan/ amend/ alter their actions to suit the above condition and successful bidder will not be entitled to any compensation due to this non-availability of the crane to maintain the schedule. |
| 28.16.3 | Services of EOT crane will be provided to other agencies working in power house building or adjacent area as required. Decision of BHEL engineer for allocation of EOT crane will be final. Successful bidder has to make adjustments accordingly. |
| 28.17 | It is not obligatory on the part of BHEL to provide any T&P or other materials other than those specifically agreed to do so by BHEL in the tender. However, depending upon availability & job requirement, BHEL/ customer may make available any T&P or other other material to successful bidder on chargeable basis. Hiring charge will be based on standard followed by BHEL/ customer, as applicable. Hire charge will be recovered from successful bidder's RA bills/ security deposit or any other dues. |
| 29.0 | ISSUE OF T&P |
| 29.1 | In the event of BHEL's issued T&P, measuring instruments, etc, successful bidder and BHEL shall maintain joint protocol about the condition of all T&P, instruments, etc taken from BHEL's custody and return to BHEL after use. Successful bidder shall not use these equipments for purposes other than the scope of work given in this tender. Only T&Ps issued by BHEL as per relevant annexure will be free of charges and balance T&P, measuring instruments, etc, if issued to successful bidder, shall be on chargeable basis. |
| 29.2 | It is the responsibility of successful bidder to keep these equipments always in working condition and ensure their safe return in working condition to BHEL's store subject to normal wear & tear. |
| 29.3 | After use of T&P items issued by BHEL the same shall be returned to BHEL in good working condition subject to normal wear & tear failing which recoveries at the book value of the item or the market rate prevailing at the time of returning the items, whichever is higher, shall be made from the payments due to successful bidder from BHEL from this contract or from any other contract. |
| 30.0 | TEST CERTIFICATE FOR T&P |
| 30.1 | All T&Ps, MMDs, lifting tackles and pulling devices, wire rope, slings to be deployed by 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 test certificate during construction, successful bidder shall revalidate the same well in advance, so that construction activities do not suffer on account of non-availability of such test certificates. |
| 30.3 | Successful bidder shall submit to BHEL for approval a list of T&Ps along with their fitness certificates. The T&Ps, MMDs, etc shall not be removed from site without written permission of BHEL. |
| 31.0 | T&P, MMD TO BE PROVIDED BY SUCCESSFUL BIDDER |
| 31.1 | Tentative list of T&P to be deployed by successful bidder for successful completion of work is given in the relevant annexure of this tender. |
| 31.2 | It may be noted that the list is not exhaustive and is only for general guidance. Successful bidder shall provide all necessary T&P (other than those specified to be provided by BHEL, if any) MMD, 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 case, successful bidder may have to deploy additional T&P. Accepted rate shall be inclusive of such requirements. |
| 31.3 | In the event of any failure on the part of successful bidder progress of work suffers, |

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| | BHEL, at their discretion may also terminate the contract and take out any or whole amount of contract from the scope of successful bidder. In line with this, in the event of failure of successful bidder to deploy necessary & sufficient T&Ps, BHEL also reserve the right 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, in case progress of work is suffered. Decision of BHEL in this regard will be final & binding on successful bidder. |
| 31.4 | Mobilization schedule as mutually agreed at site for major T&Ps, have to be adhered to so as to meet the project requirement. Successful bidder will have to give advance intimation & certification regarding capacity, etc prior to dispatch of heavy equipments. However, depending on project requirement, availability of inputs, the deployment schedule may be revised/ modified based on mutual agreement between BHEL and successful bidder. |
| 31.5 | All T&P and all IMTEs, which are required for successful and timely execution of work covered under this tender, shall be arranged & provided by successful bidder at his own cost in working condition. |
| 31.6 | After completion of major quantum of work as to be agreed by BHEL, successful bidder may be permitted to take out any of his T&P, MMD progressively, if deemed fit by Construction Manager, BHEL based on review of work progress & balance work program. The same will be jointly agreed and recorded. BHEL's decision in this regard will be final & binding on successful bidder. |
| 32.0 | INSURANCE |
| 32.1 | It is the entire responsibility of successful bidder to insure their workmen against accident & injury while at work and to pay compensation, if any, to their workmen as per Workmen's Compensation Act, other statutory regulations, etc. Successful bidder shall insure their staff against accident/ injury. |
| 32.2 | Successful bidder shall take insurance cover for all materials, tools & plants, etc, required to be provided & deployed for the job. |
| 32.3 | Insurance coverage to be taken prior to start of work and successful bidder shall make the policy available to Construction Manager, BHEL for necessary verification before start of work. However, irrespective of such verification/ acceptance, sole responsibility to maintain adequate insurance cover at all times during the period of contract shall lie with successful bidder. Regarding aforesaid insurance cover, successful bidder shall directly deal with insurance company for all matters regarding the insurance in their scope. |
| 32.4 | BHEL/ customer shall arrange comprehensive insurance policy for total supply & services for main equipment/ system covering transit risks & loss, destruction or damage during handling at site, storage, civil work, erection, testing, commissioning, etc up to trial operation/ completion of unit(s) including theft, sabotage, fire, lightning and other natural calamities. |
| 32.5 | Successful bidder shall timely intimate despatches/ discrepancy during contract operation, to the underwriter. Name of the underwriter and Policy No shall be intimated in due course of time. |
| 32.6 | Successful bidder shall be responsible for timely submission of loss/ damage/ theft to the underwriter, assistance in lodging & settlement of claim for losses/ damages/ theft/ lodging of FIR with police. Any consequential loss arising out of non-compliance of this stipulation will be borne by successful bidder. |
| 32.7 | Successful bidder will take necessary precautions/ due care to protect the material at project site, while in their custody from any damage/ loss till the same is handed over to BHEL/ customer at project site. For lodging/ processing of insurance claim, the successful bidder will submit necessary documents. BHEL reserve the right to recover the loss from successful bidder in case the damage/ loss is due to negligence/ carelessness on the part of successful bidder. In case of theft of material under successful bidder's custody, the same shall be reported to police by successful bidder immediately and copy of FIR & subsequently police investigation report shall be submitted to BHEL/ customer for taking up with insurance. However this will not relieve successful bidder of their contractual obligation for the materials |

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| | in their custody. |
| 32.8 | In case the damage/ loss/ theft of materials are attributable to negligence/ failure in discharging the duties and obligations of the successful bidder, the expenses incurred for repair/ replacement of such components in excess of the amount realized from the underwriters, limited to Normal Excess (Deductible Franchise) shall be recovered from successful bidder. |
| 32.9 | It will be responsibility of successful bidder to replenish the items lost/ damaged in time without hampering the schedule of work and without waiting for settlement of insurance claim. Amount received from the underwriters on settlement of insurance claim shall be passed on to successful bidder as and when available. |
| 32.10 | Other conditions of Insurance shall be as per relevant clause of GCC. |
| 33.0 | REPORTING DAMAGES AND CARRYING OUT REPAIRS |
| 33.1 | Checking all components/ equipment after receipt from BHEL's store/ storage yard and reporting to transport and/ or insurance authorities of any damages/ losses will be in the scope of successful bidder. Necessary assistance for verification/ survey and lodging claims with underwriters and follow up to logical conclusion will also be part of this tender. |
| 33.2 | Successful bidder shall render all help to BHEL in inspection including handling, opening packages, re-packing, re-stacking, assessing and preparing estimates for repairs of components damaged during erection, commissioning and preparing estimates for lost/ damaged during this period. Successful bidder shall help BHEL to furnish all the data required by railways, insurance company or their surveyors. |
| 33.3 | BHEL reserve the right to award or not to award any of the rectification/ rework/ repairs of damages to successful bidder. |
| 33.4 | All repairs/ rectification/ rework of damages of materials lost, if any, shall be carried out by a separately identifiable gang for certification of man-hours. Daily log sheets should be maintained for each work separately and be signed by successful bidder & BHEL. Signing of log sheets does not necessarily mean acceptance of these as extra works for payment purpose. |
| 33.5 | All rectification, repairs, reworks, etc of components lost/ damaged, which are minor and incidental to erection work (consuming up to 50 man-hours on each occasion) shall be treated as part of work without any extra cost. |
| 33.6 | Insurance cover under this policy will be as per relevant clauses of GCC. |
| 33.7 | In case the repairs/ rectification/ rework of materials lost, the work has been done by more than one agency including successful bidder, payment towards extra charges will be on pro-rata basis and decision of BHEL in this regard is final & binding on successful bidder. |
| 34.0 | ISSUE & HANDLING, USEAGE, RECONCILIATION, RECOVERY, ETC OF BHEL'S FREE ISSUED EQUIPMENT/ MATERIALS |
| 34.1 | ISSUE & HANDLING |
| 34.1.1 | BHEL will issue various equipment/ materials/ items free of cost to successful bidder as per the scope of this tender including BOQ of Volume-III. |
| 34.1.2 | Successful bidder shall maintain proper store account for all the BHEL issued materials and shall give requisite copies of monthly computerised reconciliation statement of such account to the BHEL. |
| 34.1.3 | Successful bidder shall solely be responsible for the safety & quality of material after it is handed over and issued to successful bidder by BHEL. |
| 34.1.4 | BHEL issued materials shall not under any circumstances taken out of the project site unless otherwise permitted by BHEL. |
| 34.1.5 | Necessary lifting tackles, cranes, tools & plants including tractors, trailers, trucks, pulley blocks, jacks, winches, wire ropes etc, of suitable capacities and other equipments incidental to carry out this work shall have to be arranged by successful bidder within the accepted rates/ price.. BHEL reserve the right to inspect lifting tackles and equipment before allowing their use. Such approval however shall not relieve successful bidder to ensure safe handling of equipment taking precaution to avoid any accident and damage to other equipment and personnel. |
| 34.1.6 | Successful bidder shall satisfy himself of the quality and quantity of the materials at |

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| | the time of taking delivery from BHEL/ customer store/ storage yard. No claims whatsoever will be entertained by BHEL because of quality or quantity after the materials are taken by successful bidder from BHEL/ customer. |
| 34.1.7 | Successful bidder shall submit to BHEL, a statement indicating estimated quantity of equipment/ materials required atleast 1 month in advance. |
| 34.1.8 | Successful bidder shall ensure that no lamination materials are taken over by them from BHEL. Wastage, if any due to above, shall not be compensated by BHEL. |
| 34.1.9 | Successful bidder have to note that all fasteners like MS/ HT/ HSFG bolts/ nuts, lock nuts, washers, etc shall be supplied by successful bidder as per applicable item of price schedule of tender. |
| 34.1.10 | Successful bidder to note that steel required for their enabling job like store/ site office, etc shall be arranged at their own cost. Successful bidder shall do the design for its structure just immediately after receipt of TG deck drawing and obtain approval from BHEL. |
| 34.2 | RETURN |
| 34.2.1 | All surplus equipment/ materials issued by BHEL shall be returned by successful bidder to BHEL/ customer store/ storage yard. |
| 34.2.2 | Surplus, unused and un-tampered materials shall be sorted and returned separately at a place directed by BHEL within project area; Return of such materials will not be entitled to any handling and incidental charges. |
| 34.2.3 | All wastage/ scrap (including wastage, unusable scrap) shall be returned to stores/ designated area and a receipt obtained from BHEL for material accounting purposes. Return of such material will not be entitled to any additional cost due handling and transportation and incidental charge. |
| 34.2.4 | Scrap for structural steel shall be returned separately. |
| 34.3 | USE AND WASTAGE |
| | Unless specified otherwise in the tender, following guidelines shall be applicable. |
| 34.3.1 | Theoretical consumption of various equipment/ materials shall be based on tender provision/ approved drawing/ guidelines/ mutual agreement with BHEL. No extra shall be payable for any deviation for two different procedures adopted for issue and calculation of the theoretical consumption. |
| 34.3.2 | Allowable wastage of the theoretical consumption shall be considered based on tender provision/ approved drawing/ guidelines/ mutual agreement with BHEL. Invisible wastage (loss of materials due to gas cutting, straightening of edges, etc) shall be limited to above specified guidelines and shall be considered for reconciliation purpose. But this invisible wastage shall be considered to be included in allowable wastage. |
| 34.3.3 | All wastage shall be returned to BHEL. |
| 34.4 | RECONCILIATION |
| 34.4.1 | Successful bidder shall submit a reconciliation statement of equipment/ materials issued to him, once in two months. The same may be submitted alongwith RA bill. |
| 34.4.2 | Successful bidder shall properly account for the material issued to him as specified herein to the satisfaction of BHEL certifying that the balance material are available with successful bidder's custody at site. |
| 34.4.3 | If it is noticed by BHEL that the wastage is high and calls recovery at the penal rate, then BHEL will proceed for recovery for the excess wastage as per penal recovery rates as specified from RA bill. |
| 34.5 | RECOVERY |
| | If wastage exceeds the specified limit, recovery of excess wastage shall be made from monthly RA bill at the penal rate stipulated tender provision/ approved drawing/ guidelines/ mutual agreement with BHEL. |
| 35.0 | COMPLETION PERIOD |
| 35.1 | The entire work under the scope of tender shall be successfully completed in all respect within 13 (Thirteen) months, from the date of start of work, for each package. |
| 35.2 | Successful bidder shall arrange to mobilise and start the work within 15 days from |

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| | the date of intimation by BHEL. | |
| 35.3 | The actual date of start of work of each unit will be certified by Construction Manager, after adequate mobilisation of manpower, T&P by successful bidder. This certificate date will be deemed as start of work of respective units at site for purpose of the contract time schedule. | |
| 36.0 | CONSTRUCTION/ SUPPLY SCHEDULE | |
| 36.1 | Entire work shall be carried out in accordance with the broad project milestone schedule in conjunction with broad schedule of this package as furnished in the tender, within the stipulated completion period. This schedule will undergo review and based on progress vis-à-vis project requirement, successful bidder may have to submit revised schedule for approval of BHEL. | |
| 36.2 | Schedule of broad service of the subject job for unit # 3 | |
| | Event/ milestone | Schedule (wef SOW) |
| 36.2.1 | Completion of associated equipment/ system for compressed air system readiness. | Within 2 months. |
| 36.2.1 | Supply completion of HSE equipment under Package-A | Within 2 months. |
| 36.2.3 | Completion of associated equipment/ system for air conditioning system readiness. | Within 3 months. |
| 36.2.4 | Completion of associated equipment/ system for boiler light up. | Within 5 months. |
| 36.2.5 | Completion of associated equipment/ system for steam blowing. | Within 8 months. |
| 36.2.6 | Balance supply completion of SCH-3 items under Package-A. | Within 8 months. |
| 36.2.7 | Supply completion of SCH-3 items under Package-B. | Within 8 months. |
| 36.2.8 | Completion of associated equipment/ system for synchronization. | Within 9 months. |
| 36.2.9 | Completion of associated equipment/ system for trial run. | Within 10 months. |
| 36.2.10 | Completion of associated equipment/ system for PG test. | Within 12 months. |
| 36.2.11 | Balance work completion as per scope of tender. | Within 13 months. |
| 36.3 | Successful bidder shall submit detail program identifying equipment & system mandatorily associated with each of aforesaid events/ milestones, to BHEL for approval. | |
| 36.4 | Successful bidder shall plan their work in such a manner so as to meet the above construction schedule & project schedule, in consultation with BHEL/ customer. | |
| 36.5 | Successful bidder shall submit daily work program based on above construction schedule. Deferment of schedule is not acceptable, unless specifically called for by BHEL. Successful bidder will adhere to schedule and resource planning to be augmented to ensure completion as per schedule. Slippage from adherence to this schedule will attract penalty/ LD as per tender provision. | |
| 36.6 | Periodic progress reviews on the entire activities of execution in respect of supply & works in scope of successful bidder will be held once in a month at Kolkata/ site. These meetings will be attended by reasonably higher officials of successful bidder and will be used as a forum for discussing all areas where progress needs to be speeded up. Successful bidder shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings. | |
| 36.7 | Even if there is delay in customer input for carrying out the job, successful bidder shall take necessary steps, in terms of augmentation of T&P, manpower, overtime, etc. to meet above mentioned schedule. | |
| 37.0 | CERTIFICATE TOWARDS COMPLETION | |
| | The work under the scope of successful bidder shall be deemed to have been completed in all respects only when so certified by BHEL/ customer. Decision of BHEL in this regard shall be final and binding on successful bidder. | |
| 38.0 | EXTENSION OF COMPLETION PERIOD | |
| 38.1 | Successful bidder shall submit detail work program (L-2 schedule) for approval of BHEL, as detailed in construction schedule. The approved schedule will be taken into account as basis for consideration of contract extension as per following detail. | |

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| 38.2 | If the completion of work as detailed in the scope of work gets delayed beyond the contract/ completion period, successful bidder shall request for an extension of the contract and BHEL at its discretion may extend the contract. |
| 38.3 | Based on the reviews jointly signed, the works balance at the end of original contract period less the backlog attributable to successful bidder shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', successful bidder is bound to complete the portion of backlog attributable to successful bidder. Any further 'Time extension' or 'Time extensions' at the end of the previous extension shall be worked out similarly. |
| 38.4 | However, if any 'Time extension' is granted to successful bidder to facilitate continuation of work and completion of contract, due to backlog attributable to successful bidder alone, then it shall be without prejudice to the rights of BHEL to impose penalty/ LD for the delays attributable to successful bidder, in addition to any other actions BHEL may wish to take at the risk & cost of successful bidder. |
| 38.5 | A joint programme shall be drawn for the balance amount of work to be completed during the period of 'Time Extension', along with matching resources to be deployed by successful bidder as per specified format. Review of the programme and record of shortfall shall be done. |
| 38.6 | During the period of 'Time extension', successful bidder shall maintain their resources as per mutually agreed program. |
| 38.7 | At the end of total work completion as certified by BHEL, and upon analysis of the total delay, the portion of time extensions attributable to (i) Successful bidder, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to be exhausted in the same order. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed/ levied for the portion of time extensions attributable to successful bidder and recoverable from the dues payable to successful bidder. |
| 39.0 | SECURITY DEPOSIT & PERFORMANCE BOND |
| 39.1 | Security deposit shall be applicable as per relevant clause of GCC (Volume-IB). |
| 39.2 | Performance bond is not applicable. |
| 40.0 | TAXES, DUTIES, ETC |
| 40.1 | TDS under Income Tax, VAT, etc shall be deducted at prevailing rates on Gross Invoice Value from RA bills unless Exemption Certificate in FORM VAT-606 from the appropriate authority/ authorities is being furnished. |
| 40.2 | All taxes excluding Service Tax, Swachh Bharat Cess, KRISHI KALYAN Cess on Service Tax, but including Works Contract Tax under state VAT Act-if any, charges royalties, duties, Entry Tax, Cess, any state or central levy & other taxes for materials obtained for the work and for the execution of the contract shall be borne by successful bidder and shall not be payable extra. Any increase of the same at any stage during execution of the contract, including extension, shall have to be borne by successful bidder. Quoted/ accepted rates/ price shall be inclusive of all such requirements after taking the Input Credit, if any, as per provisions of the State VAT Act. Successful bidder is responsible to furnish all documentary evidences towards payment of Works Contract Tax as & when required by BHEL, if applicable. Submission of Tax Invoice is a must after Grossing up the Bills as the price is inclusive of VAT. |
| 40.3 | The bidder is required to provide us Tax Invoice wherein VAT tax on materials used/ consumed must appear with applicable tax rate. In other words; tax invoice would clearly show vivisection of materials and services value separately. If vivisection is not possible, the bidder may follow RULE 6-APPENDIX of Orissa Value Added Tax Rules, 2005 towards expenses on account of labour and service i.e % of labour, service and like charges of total value of works 30%. |
| 40.4 | Successful bidder must be a registered dealer with the State Value Added Tax Act, |

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| | 2004, if not registered yet, and a copy of the said registration certificate (JVAT FORM NO: 101) along with TIN number must be provided to RAO, BHEL site. |
| 40.5 | No Road Permit/ Way Bill will be provided by BHEL for this job for bringing materials from outside state to Odisha state. Successful bidder have to make their own arrangement at their cost for completing the formalities, if required, with state VAT Act authorities, for bringing their materials, plants & machinery at site for execution of the works under this contract, Road Permit/ Way Bill, if required, shall be arranged by successful bidder. |
| 40.6 | SERVICE TAX |
| 40.6.1 | Service Tax along with SWACH BHARAT Cess and KRISHI KALYAN Cess as legally leviable & payable by successful bidder under Sec-65B (44) shall be paid by BHEL on production of GAR-7 challan. |
| 40.6.2 | Vide Section 68 (1) of Finance Act, 1994 read with Rule 6 (1) of Service Tax rules, 1994, payment of Service Tax at the rate specified in Section 66B in Section 68 wef 01-07-2012, vide Order no 1/2012 dated 15-06-2012 is reimbursable by BHEL. Successful bidder shall furnish proof of Service Tax registration with Central Excise Division covering the services under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by the successful bidder on BHEL for this project. |
| 40.6.3 | Successful bidder shall issue invoice complying with Rule 4A of the Service Tax Rules 1994. The invoice shall indicate the name, address and the registration number (PAN Based STC no) of the bidder; the name, address and the registration number AAACB4146PST005 of BHEL; the description and value of taxable service provided; and the Service Tax payable thereon by successful Bidder. |
| 40.6.4 | BHEL-PSER will not be held to be responsible for non-compliance of various Service Tax rules, being framed from time to time. |
| 40.6.5 | Point of Taxation Rule, 2012 has come into operation from 01-04-2012. As per the rule Invoice must be generated within 30 days from the date of completion of service. In such case, the date of invoice will be the relevant date. However, if the invoice is not generated within 30 days as stated above, the date of completion of service shall be the relevant date. |
| 40.6.6 | Successful Bidder must take adequate care and cautions wrt "Point of Taxation Rule 2012" as otherwise both the Bidder (for non-compliance) and BHEL (unable to take input Services, resulting in extra fund flow in that particular month) will suffer. |
| 40.6.7 | With introduction of Cenvat Credit Rules, 2004 which came into force wef 10-09-04, Excise Duty paid on input goods including capital goods used for providing the output service and Service Tax paid on Input Service can be taken credit of against the Service Tax payable on output service. As such, while offering the rates, successful bidder may take into account the benefit of above provisions, as the cost of input to successful bidder will be net of Excise Duty and Service Tax and adjust their offer price accordingly to make it more competitive. |
| 40.7 | B.O.C.W Cess |
| 40.7.1 | Under Building and other construction workers (Regulation of employment and conditions of service)(BOCW) Rule 2009 dated 30-04-2009,the successful Bidder shall do necessary registration before commencement of work vide section 46 of BOCW Act.The required forms may be collected from the office of Dy. Labour Commissioner ,Rourkela/Local Area. |
| 40.7.2 | Vide Section 3(1) of this Act of the BOCW Welfare Cess Act, 1996. "There Shall be levied and collected a cess for the purposes of the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996, at such rate not exceeding two percent, but not less than one per cent, of the cost of construction incurred by an employer, as the Central Government may, by notification in the Official Gazette, from time to timespecify. |
| 40.7.3 | Vide notification no. SO 2899 dt. 26-09-96, 'employer' is required to pay cess on the cost of construction @ 1% of the cost of construction. Hence discharge of B.O.C.W Cess, payment proof (Challan) is must and must be accompanied with each and every R.A Bills including Final Bills. |

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| 40.7.4 | If subsequently Cess is being deposited by the Owner of the Project for any reasons, BHEL will reduce the Contract Price by 1 % or may recover the same from the Bills (both Supply and Services Price) |
| 40.8 | Entry Tax |
| 40.8.1 | Successful Bidder has to get Entry Tax Registration Certificate from Local Sales Tax Authority and has to pay Entry Tax on the Import Value for bringing scheduled goods to local area of IB-VALLEY for use, sale & consumption for this Project / Purchase Order. Entry Tax paid Challan / Invoice Copy shall be made available to BHEL-Site Finance on a monthly basis. |
| 40.9 | New taxes, duties, etc, if imposed by statutory authority after latest due date of offer submission, as per NIT & TCN, as applicable, and within the contract period including extension, if any (provided reason for extension is not attributable to successful bidder), shall be reimbursed by BHEL at actual on production of relevant supporting document to the satisfaction of BHEL. However, successful bidder shall obtain prior approval from BHEL before depositing new taxes, duties, etc. Benefits and/or abolition of all existing Taxes must be passed on to BHEL against new Taxes, if any, proposed to be introduced in a latter date. |
| 41.0 | TERMS OF PAYMENT |
| 41.1 | Successful bidder shall submit RA bill, normally, once in a month at the end of each month as per billing break-up of the tender. The measurement will be taken by BHEL as per relevant clause of GCC or as specified elsewhere in tender and certify regarding actual work executed in the measurement book and bills for work. |
| 41.2 | 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 certificate, certified by BHEL; within 60 days of submission of the bill, correct & complete in all respects. |
| 41.3 | For all items of work of price schedule, except manpower assistance items, if any, 90% of gross bill value shall be payable amount against each RA bill. |
| 41.4 | For manpower assistance items of work of price schedule, 95% of gross bill value shall be payable amount against each RA bill. |
| 41.5 | Balance 10% of gross value for all items of work as per price schedule, except manpower assistance items, if any, shall be payable in following manner. |
| 41.5.1 | 5% of gross value shall be payable against completion of milestone activities as specified in the billing break-up. |
| 41.5.2 | Balance 5% of gross value shall be payable along with final bill. However, this 5 %, retained from each RA bill, may be released against submission of a separate bank guarantee as per Performance Bank Guarantee format, to be kept valid till final bill & guarantee period, subject to (i) Receipt of certificate that all works are completed in all respects; (ii) Reconciliation of materials/ T&P/ MMD; (iii) Completion of final bill formalities and (iv) Handing over to BHEL/ customer. |
| 41.6 | 5% of balance gross value for manpower assistance items, if any, shall be payable along with final bill. |
| 41.7 | Progressive payment as per terms of payment provision of the tender, shall be made as per billing break-up of tender, operated on accepted rates/ price. |
| 41.8 | Out of above interim payment against each RA bill, 2.5 % 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-fulfillment of respective activity by successful bidder in each month, no payment shall be made by BHEL against corresponding activity and no claim of successful bidder, at a later date, whatsoever, in this regard will be entertained by BHEL. |
| 41.8.1 | 0.5 % shall be paid on compliance of house-keeping of successful bidder's working area and store/ office areas. |
| 41.8.2 | 0.5 % shall be paid on compliance of general illumination of successful bidder's working area and stores, office area. |
| 41.8.3 | 0.5 % shall be paid on compliance of applicable OHSAS requirement as per guidelines of BHEL and as specified in the tender. |
| 41.8.4 | 0.75 % shall be paid on compliance of applicable safety requirement as per |

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| | guidelines of BHEL and as specified in the tender. | | |
| 41.8.5 | 0.25 % shall be paid on compliance of applicable security requirement as per guidelines of BHEL. | | |
| 41.9 | Each RA bill shall accompany with latest agreed & jointly signed L-3/ construction schedule, as enumerated in this tender. | | |
| 41.10 | All admissible recovery/ adjustment, etc shall be made from interim payable amount. | | |
| 41.11 | No extra payment shall be made in the event of deferment in payment. | | |
| 42.0 | BILLING BREAK-UP | | |
| 42.1 | Progressive payment, as per terms of payment provision of the tender, shall be made as per following billing break-up, operated on contract rate/ price. The percentages of billing break-up are only for the purpose of progressive payments and should not be construed as price of individual items and successful bidder shall complete the work without any reference to the break-up. | | |
| | Description of activity | % allocation | Reference item sl no of Volume-III |
| 42.1.1 | Cable tray with accessories/ tray fixing material, supporting structure, tray cover, etc. | | |
| 42.1.1.1 | Fabrication & erection of cable tray including tray cover, as applicable, complete in all respects. | 80% | 1.0 (SCH-2) |
| 42.1.1.2 | Final painting, marking of tray. | 20% | |
| 42.1.1.3 | Sub-total. | 100% | |
| 42.1.2 | Cabling. | | |
| 42.1.2.1 | Laying of cable. | 70% | 2.0 (SCH-2) |
| 42.1.2.2 | Dressing & clamping. | 10% | |
| 42.1.2.3 | Cable termination, tagging. | 10% | |
| 42.1.2.4 | Commissioning of connected equipment. | 10% | |
| 42.1.2.5 | Sub-total. | 100% | |
| 42.1.3 | Junction box/ local push button station. | | |
| 42.1.3.1 | Erection including fabrication of supporting frame | 70% | 3.0 (SCH-2) |
| 42.1.3.2 | Fixing/ testing of terminal block. | 10% | |
| 42.1.3.3 | Painting of supporting frame, name plate fixing. | 10% | |
| 42.1.3.4 | Commissioning of connected equipment. | 10% | |
| 42.1.3.5 | Sub-total. | 100% | |
| 42.1.4 | Conduit/ pipe/ impulse pipe/ other pipe/ copper tube/ SS tube. | | |
| 42.1.4.1 | Laying along with installation of supporting structure, wherever required, complete in all respect. | 80% | 4.0 (SCH-2) |
| 42.1.4.2 | Dressing/ clamping, tagging, painting, as applicable. | 10% | |
| 42.1.4.3 | Commissioning of connected equipment. | 10% | |
| 42.1.5 | Control panel/ cubicle/ desk/ UPS/ transmitter rack/ insert/ battery/ PLC | | |
| 42.1.5.1 | Placement, alignment including fabrication & erection of supporting frame. | 70% | 6.1 to 6.7, 11.0 (SCH-2) |
| 42.1.5.2 | Fixing of loose items/ instruments. | 10% | |
| 42.1.5.3 | Charging, loop testing, commissioning including auto control commissioning, as applicable. | 20% | |
| 42.1.5.4 | Sub-total. | 100% | |
| 42.1.6 | Control valve/ power cynder (excluding erection of valve/ power cylinder, but including erection of accessories, calibration, testing, commissioning) | | |
| 42.1.6.1 | Fixing of loose components, like AFR, tubing, etc including fabrication & erection of supports | 30% | 7.0 (SCH-2) |
| 42.1.6.2 | Local testing, checking, calibration, remote testing & commissioning. | 40% | |
| 42.1.6.3 | Loop testing/ commissioning, auto control commissioning, as applicable. | 20% | |

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| 42.1.6.4 | System commissioning | 10% | |
| 42.1.6.5 | Sub-total. | 100% | |
| 42.1.7 | Instrument/ equipment | | |
| 42.1.7.1 | Calibration/ testing, checking, erection including fabrication and erection of supporting frame, wherever required. | 60% | 8.0 (SCH-2) |
| 42.1.7.2 | Charging, local testing/ commissioning & tagging. | 20% | |
| 42.1.7.3 | Remote testing/ loop commissioning, auto control commissioning. | 10% | |
| 42.1.7.4 | System commissioning. | 10% | |
| 42.1.7.5 | Sub-total. | 100% | |
| 42.1.8 | Plant monitoring system | | |
| 42.1.8.1 | Placement and alignment, interconnection of equipment & peripherals, cable laying & termination and fixing of loose items. | 35% | 6.8 to 6.25, (SCH-2) |
| 42.1.8.2 | Charging, initialisation and configuring, Signal checking. | 20% | |
| 42.1.8.3 | Pre-commissioning, commissioning. | 35% | |
| 42.1.8.4 | System commissioning. | 10% | |
| 42.1.8.5 | Sub-total. | 100% | |
| 42.1.9 | Activities excluding commissioning. | | |
| 42.1.9.1 | Placement, alignment including fabrication & erection of supporting frame. | 60% | 5.0 (SCH-2) |
| 42.1.9.2 | Fixing of loose items/ instruments. | 30% | |
| 42.1.9.3 | Commissioning (By other agency). | 10% | |
| 42.1.9.4 | Sub-total. | 100% | |
| 42.1.10 | Fabrication, installation, painting, etc of supporting structure, base frame, chequered plate, insert plate/ anchor fasteners, canopy, etc | | |
| 42.1.10.1 | Fabrication. | 50% | 12.0 (SCH-2) |
| 42.1.10.2 | Installation. | 40% | |
| 42.1.10.3 | Painting. | 10% | |
| 42.1.10.4 | Sub-total. | 100% | |
| 42.1.11 | Power cylinder | | |
| 42.1.11.1 | Fabrication & erection of supports, erection of power cylinder, levelling & alignment, grouting etc. | 35% | 10.0 (SCH-2) |
| 42.1.11.2 | Local testing, checking, calibration, Remote testing & commissioning | 40% | |
| 42.1.11.3 | Loop testing and commissioning, Auto control commissioning | 20% | |
| 42.1.11.4 | System commissioning | 5% | |
| 42.1.11.5 | Sub-total. | 100% | |
| 42.1.12 | Supply of items | | |
| 42.1.12.1 | On receipt of materials/ items against material despatch clearance certificate (MDCC) & material receipt certificate (MRC), issued by BHEL, and its physical verification at site. | 70% | All items of SCH-3 |
| 42.1.12.2 | On laying/ installation/handing over of materials/ items. | 30% | |
| 42.1.12.3 | Sub-total. | 100% | |
| 42.1.13 | CALIBRATION, TESTING, COMMISSIONING | | 9.0 (SCH-2) |
| 42.1.13.1 | On commissioning of the items/components | 100% | |
| 42.1.14 | Manpower assistance for commissioning (Only for commissioning service of equipments/ items, beyond the scope of this tender). | | |
| 42.1.14.1 | On completion of work. | 100% | SCH-4 |
| 42.2 | Break-up of 5% of gross value of each RA bill to be released against completion of milestone activities shall be as per the following manner. | | |
| 42.2.1 | 1.5 % on successful coal synchronisation of the unit. | | |
| 42.2.2 | 1.5 % on successful completion of trial run of the unit. | | |

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| 42.2.3 | 1.0 % on successful completion of PG test of the unit. |
| 42.2.4 | 0.5 % on submission of as-built drawing & acceptance of the same by BHEL. |
| 42.2.5 | 0.5 % on winding of site establishment. |
| 42.3 | BHEL site at its discretion may further split up above percentage break up and effect payment matching with micro break-up of activity, suit site condition, cash flow requirement, according to the progress of work. |
| 43.0 | RETENTION AMOUNT |
| 43.1 | Shall be as per as per terms of payment/ biling break-up of this volume. |
| 43.2 | No retention will be effected on successful bidder's bills for extra/ additional item of works. |
| 44.0 | INTEREST BEARING RECOVERABLE ADVANCE/MOBILISATION ADVANCE |
| | Not applicable for this tender. |
| 45.0 | OVER RUN CHARGE (ORC) |
| | Not applicable for this tender. |
| 46.0 | REVISION ON ACCEPTED CONTRACT RATE |
| | Not applicable in this tender. |
| 47.0 | PRICE VARIATION CLAUSE/ ESCALATION (PVC) |
| 47.1 | Applicable only on items of SCH-2 of Volume-III as per relevant provision of GCC, together with following supplementary terms & conditions. |
| 47.2 | PVC shall be applicable only after normal completion period on balance work, in case of any extension, for reasons not attributable to successful bidder. No PVC shall be applicable during normal completion period. |
| 47.3 | Base index (X_0) shall be average of indices of various components of tender, starting from latest due date of submission of complete offer (as per NIT & TCN, as applicable) to the original completion period, as specified in tender. |
| 47.4 | Overall ceiling of PVC will be limited to 10 % of executed price, excluding supply price, if any. Executed price for this purpose is exclusive of PVC, ORC, additional/ extra works. |
| 47.5 | No PVC shall be applicable for SCH-3 & SCH-4 scope of price/ rate schedule. |
| 47.6 | All other terms & conditions shall be as per GCC. |
| 48.0 | EXTRA/ ADDITIONAL ITEMS OF WORK |
| | Shall be as applicable as per GCC. |
| 49.0 | LIQUIDATED DAMAGE |
| 49.1 | If successful bidder fails to complete entire scope within 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 contract price, including taxes, duties, etc, for delay of each week or part thereof. |
| 49.2 | Apart from above LD and other recoveries specified elsewhere in the tender, if successful bidder fail to complete intermediate activity/ milestone as per construction schedule of the tender or as per agreed schedule in kick-off meeting or as per modified activity/ milestone schedule, drawn jointly after award of work, for reasons attributable to them BHEL reserve the right to impose penalty a sum equivalent to 0.1% of contract price, including taxes, duties, etc, for delay of each week or part thereof for each items of intermediate schedules. |
| 49.3 | The total liability for delay shall not in any case exceed 14 % (Fourteen percent) of the contract price, including taxes, duties, etc. Contract price for this purpose, shall be the final executed value exclusive of ORC, extra work executed, supplementary/ additional items and PVC. |
| 49.4 | BHEL shall deduct aforesaid amounts from any money due or which may become due to successful bidder and/ or recover from the bank guarantees/ security deposit of 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. |
| 49.5 | BHEL reserve the right to complete the job through other resource on account of and at the risk & cost of successful bidder with notice to successful bidder of the work not so executed, without cancelling the order/ contract in respect of the work |

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| | not yet due for completion. |
| 49.6 | BHEL reserve the right to cancel the order/ contract or a portion thereof for the work not so completed at the risk & cost of successful bidder and successful bidder shall be liable to BHEL for any excess costs thereof. |
| 49.7 | Successful bidder shall continue with performance of the order/ contract under all circumstances, to the extent not cancelled. |
| 49.8 | Where action is taken as per above, successful bidder shall be liable for any loss, which BHEL may sustain on that account. Successful bidder shall not be entitled to any gain on such action and the manner & the method of such purchase shall be at the 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. |
| 50.0 | GUARANTEE |
| 50.1 | Even though the work will be carried out under supervision of BHEL, successful bidder will be responsible for the quality of workmanship, quality of materials/ items and design for which successful bidder is responsible. |
| 50.2 | Successful bidder shall guarantee the work executed under the scope of the contract for a period of 24 (Twentyfour) months from the date of start of guarantee period as certified by the engineer (ie on completion of total work under scope and/ or taking over by BHEL/ owner) and shall rectify free of cost all defects due to faulty supply or work done. In case successful bidder 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 successful bidder's risk and cost without prejudice to any other rights and recover the same from security deposit/ other dues. |
| 50.3 | Other provision shall be as per the GCC. |
| 51.0 | CONTRACT PRICE |
| 51.1 | Bidder shall quote their price as per the format of Volume-III, price schedule (Latest revision) only. |
| 51.2 | Bidder may submit their offer for PACKAGE-A and/ or PACKAGE-B in separate sealed envelopes. |
| 51.3 | Evaluation & awarding will be done separately on PACKAGE-A & PACKAGE-B. |
| 51.4 | Package-wise total price will be considered for evaluation. |
| 51.5 | Quantities of various items mentioned in the respective Price schedules, Volume-III are approximate, based on very preliminary information and may vary to any extent or to be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of the work executed under any part of this contract including extra items, if any, but excluding any price variation, remains within +/- 15 % (plus/ minus fifteen percent) of the awarded price (as per LOI/ WO). |
| 51.6 | Accepted unit rates for each panel shall remain firm regardless of any change in width, height, type, weight or other parameter (except length), as furnished in tender. For variation in length, adjustment to accepted rate of panel shall be based on following modality. Decision of BHEL shall be final & binding on bidder. |
| 51.6.1 | For variation in length within +/- 15% of panel, accepted unit rates shall remain firm. |
| 51.6.2 | For variation in length of panel beyond +/- 15% of specified length, wherever indicated in the tender, rate of unit length of variation shall be arrived by dividing the item rate by length as indicated in tender and rate/ price adjustment for payment during execution for length excess/ shortage over & above the +/- 15 % variation of indicated length shall be done accordingly on the following basis. |
| 51.6.3 | Based on above, if actual length exceeds variation limit, accepted unit rates will undergo change for the portion beyond 1.15/ 0.85 times of indicated length, additional payment/ recovery will be effected by BHEL in the following manner. |
| 51.6.3.1 | Length of panel as indicated in tender = A. |
| 51.6.3.2 | Accepted unit rate for panel = Rs B. |
| 51.6.3.3 | Rate per unit length (L) to be considered for the purpose of additional payment/ recovery for variation in length = Rs B/A = Rs C. |
| 51.6.3.4 | Actual length of the panel = D. |

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| 51.6.3.5 | Additional payment/ recovery in unit rate for variation of length beyond length $(1.15A/ 0.85A) = (D-1.15A)/ (0.85A-D) \times C$. |
| 51.7 | Applicability of new size of cable tray, cable, etc for a project of such magnitude may be inevitable. To derive rates of such new items of installation of cable tray, laying of cable, cable termination, etc, which are not covered in BOQ of Volume-III, following guidelines shall be applicable for this tender. Decision of BHEL shall be final & binding on bidder. |
| 51.7.1 | For new size cable tray, width of cable tray will be taken into reference and rate of installation of cable tray of nearest width will be pro-rated to derive the rate for installation of new cable tray. |
| 51.7.2 | To derive the rate for laying of new size cable, OD of cable will be taken into reference and rate of laying of cable of nearest lower OD will be pro-rated to derive the rate for laying of for new cable. |
| 51.7.3 | Rate for termination of new size cable and other items will be derived based on mutually agreed modality and on approval of BHEL. |
| 52.0 | OTHER TERMS |
| 52.1 | While bidder's scope includes deployment of all resources, like T&P, materials, consumables, manpower including supervision etc for proper completion of the subject job and no sub-contracting for execution of the job is allowed by BHEL, depending on project's requirement and on prior acceptance of BHEL, bidder may associate agencies for deployment of skilled/ unskilled manpower only for site execution. Bidder should arrange all resources, like T&P, materials, consumables, supervision etc directly for the subject job. |
| 52.2 | Drawing for work as per the tender shall be furnished to successful bidder in a phased manner as far as possible. |
| 52.3 | Successful bidder shall have to arrange relevant IS/ ASME/ any other code as applicable for execution of this contract. |
| 52.4 | During welder's test and for execution of work, relevant testing shall have to be arranged by successful bidder at their cost from approved laboratory |
| 52.5 | Access to erection site may not be conducive for easy movement of cranes/ trailers. Accordingly, strengthening of roads, temporary construction, laying of steel plates, etc will have to be done by successful bidder without any extra cost to BHEL. |
| 52.6 | Quality engineer of successful bidder should have valid level-II certificate for conducting UT/ RT/ MP test. |
| 52.7 | It is not obligatory on the part of BHEL to provide any tools & tackles or other materials other than those specifically agreed to do so by BHEL. However, depending upon availability, BHEL/ customer handling equipment and other plants may be made available to successful bidder on payment of hire charges, subject to the conditions laid down by BHEL/ customer from time to time. Unless paid in advance, such hire charges, if applicable shall be recovered from successful bidder's RA bill/ security deposit or any other payment. |
| 52.8 | In case of any recovery is made by customer, due to lapses on the part of successful bidder during execution in respect of safety/ quality, the same shall be recovered on back to back basis from successful bidder without prejudice to any other rights of the BHEL |
| 52.9 | Cable lugs for cables above 2.5 sqmm and glands will be supplied by BHEL free of cost. Successful bidder shall ensure proper reconciliation of free issue materials. Cable lugs (Al/ Cu) of 2.5 sqmm & below, sleeves, ferrules, etc, as required, has to be supplied by successful bidder, unless specified otherwise elsewhere in the tender. Bidder's quoted rates for cable laying, etc (SCH-2) of Volume-III shall be inclusive of this. |
| 52.10 | Successful bidder shall submit 'Subsuccessful bidder Acknowledgement and Consent Form', duly filled-in, signed, for service part as per prescribed format, available with this tender, after placement of LOI, as per instruction of BHEL. |
| 52.11 | In case of any failure to meet various requirements detailed in this volume of tender or elsewhere, BHEL will take necessary action to get it done and the cost, along with BHEL's applicable overhead will be recovered from successful bidder's RA bill. |

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| 52.12 | All other term & conditions of this specification, not mentioned above shall be governed by the pertinent provisions of GCC, Volume-IB. |
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ANNEXURE-I
LIST OF T&Ps TO BE PROVIDED BY BHEL FREE OF CHARGE ON SHARING BASIS

| SL NO | ITEM |
|----------|---|
| 1.0 | 75T OR HIGHER CAPACITY CRAWLER CRANE – 1 NO, AS REQUIRED. |
| 2.0 | EOT CRANE IN TG HALL – AS INSTALLED, AS REQUIRED. |

| NOTE | |
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| 1.0 | Successful bidder shall note that since above T&Ps will be used by various agencies at site, can be issued depending on availability & as per direction of BHEL. Terms of issue shall be as specified in the tender. |

ANNEXURE-II
LIST OF T&Ps TO BE DEPLOYED BY SUCCESSFUL BIDDER FOR EACH PACKAGE

| SL NO | ITEM |
|-------|---|
| 1.0 | ARC/ TIG WELDING MACHINE AND SET. |
| 2.0 | GAS CUTTING SET. |
| 3.0 | ELECTRIC BLOWER. |
| 4.0 | VACUUM CLEANER. |
| 5.0 | HAND OPERATED MEGGER, 500V & 1000V. |
| 6.0 | DIGITAL MULTIMETERS, 3.5 DIGIT. |
| 7.0 | ANALOG MULTIMETER. |
| 8.0 | TONG TESTER WITH SELECTOR SWITCH, 0-1000V. |
| 9.0 | VARIAC, 3 PHASE, 415V, 5A. |
| 10.0 | VARIAC, 1 PHASE, 5A. |
| 11.0 | DECADE RESISTANCE BOX. |
| 12.0 | DC CALIBRATORS 0-200 MV/ 0-20MA (PORTABLE/ BATTERY OPERATED). |
| 13.0 | DEAD WEIGHT TESTER OR ITEM NO 15.0. |
| 14.0 | COMPARISON TESTER 0-400 KG/ SQCM. |
| 15.0 | MASTER PR GAUGE, 0.2-1 KG/ SQCM, 0-4KG/ SQCM, 0-16 KG/ SQCM, 0-40 KG/ SQCM, 0-300 KG/ SQCM, -1 TO 0 KG/ SQCM. |
| 16.0 | OIL BATH WITH COOLER FOR TEMP, 0-160 DEG C. |
| 17.0 | SALT BATH FOR TEMP UP TO 1200 DEG C. |
| 18.0 | MERCURY IN GLASS THERMOMETER, 0-120 DEG C, 0-200 DEG C. |
| 19.0 | U-TUBE MANOMETER (MERCURY & WATER). |
| 20.0 | REGULATED DC POWER SUPPLY, 0 TO +/- 30 V, 5A TO 15A. |
| 21.0 | FUNCTION GENERATOR. |
| 22.0 | OSCILLOSCOPE. |
| 23.0 | MANUAL CRIMPING TOOL SUITABLE FOR ALL SIZES. |
| 24.0 | TARPAULIN (BIG & SMALL). |
| 25.0 | WATCHMAKER SCREW DRIVER SET. |
| 26.0 | TERRY SPANNER SET. |
| 27.0 | BOX SPANNER SET. |
| 28.0 | D-SPANNER SET. |
| 29.0 | VACUUM PULLER FOR SOLDER. |
| 30.0 | SOLDERING IRON (TEMPERATURE CONTROLLED). |
| 31.0 | BENCH VICE. |
| 32.0 | PISTOL DRILLING MACHINE. |
| 33.0 | WATCHMAKER VICE. |
| 34.0 | DRILL BIT SET. |
| 35.0 | SLING & MANILA ROPE. |
| 36.0 | HAND TOOLS, SPANNERS AND TORQUE WRENCH. |
| 37.0 | STAR POINT SCREW DRIVER. |
| 38.0 | HAND LAMP WITH GLASS COVER. |
| 39.0 | SOCKET FOR SOCKET WRENCH, M10, M12. |
| 40.0 | REVERSIBLE RATCHET HANDLE. |
| 41.0 | GENERAL TOOLS FOR ELECTRICIAN. |
| 42.0 | GENERAL TOOLS FOR FITTER. |
| 43.0 | GENERAL TOOLS FOR RIGGER. |
| 44.0 | HYDRAULIC TEST PUMP. |
| 45.0 | COPPER TUBE BENDER. |
| 46.0 | PIPE BENDER. |
| 47.0 | NEEDLE FILE SET. |
| 48.0 | ALLEN KEY SET (BOTH MM AND INCH SIZE). |
| 49.0 | SLIDE WRENCH. |

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| | |
|------|--|
| 50.0 | NEEDLE PULLER. |
| 51.0 | TRAY CUTTING MACHINE. |
| 52.0 | DIAL GAUGE, VERNIER SCALE. |
| 53.0 | PORTABLE LOW PR/ VACUUM CALIBRATER (-1 TO 10 KG/SQM) WITH DIGITAL DISPLAY. |
| 54.0 | PORTABLE TEMPERATURE CALIBRATER (UPTO 600 DEGREE C). |
| 55.0 | RHEOSTAT 100 OHM, 5A. |
| 56.0 | 0.2 TO 1.0 KG/ SQCM PENWALT OR EQUIVALENT PNEUMATIC TESTING KIT. |
| 57.0 | PORTABLE AIR COMPRESSOR AND VACUUM PUMP FOR VACUUM GAUGE. |

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|-------------|---|
| NOTE | |
| 1.0 | Successful bidder shall note that this list is not exhaustive and they may be required to provide additional T&Ps not covered in the list for proper execution of the job, at no extra cost to BHEL. |
| 2.0 | All Master Gauge should be of 0.25% accuracy and 0.5% resolution. |
| 3.0 | 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. |
| 4.0 | Successful bidder shall note periodical testing & calibration of testing equipment are to be done at CMERI/ Durgapur, ERIL/ Kolkata, Regional Research Laboratories/ Gwahati/ Jorhat/ Bhubaneswar and copy of test certificates to be submitted to BHEL as per 'ISO' norms. |
| 5.0 | MMD and T&P shall be mobilized and deployed by successful bidder, as required at the site for successful execution of the job. |

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| TENDER NO – PSER:SCT:BNP-I1778:16 | | |
| VOLUME–IF-TCC-CML-E,R-1 (TCN-01) | TECHNICAL CONDITIONS OF CONTRACT (SERVICE) | PAGE 43 OF 43 |

ANNEXURE-III

LIST OF CONSUMABLE TO BE SUPPLIED BY SUCCESSFUL BIDDER FOR EACH PACKAGE

| SL NO | ITEM |
|-------|--|
| 1.0 | MS BOLTS, NUTS, PLAIN WASHERS AND SPRING WASHER, AS REQUIRED. |
| 2.0 | COPPER WASHER, WHEREVER REQUIRED. |
| 3.0 | WELDING ELECTRODE, GAS, FILLER WIRE, CLEANING AGENTS, ETC. |
| 4.0 | CABLE TAG, FERRULES, LUGS UPTO 4 SQMM, ALUMINIUM STRIPS/ FASTENERS, ETC. |
| 5.0 | SAND, CHIPS, ETC FOR MINOR CIVIL WORKS. |
| 6.0 | EMERY SHEETS, GREASE, ETC. |
| 7.0 | OXYGEN & DA CYLINDERS. |
| 8.0 | PRIMER & PAINTS. |
| 9.0 | ½” MS PLUGS AS REQUIRED. |
| 10.0 | ANY OTHER ITEM AS SPECIFIED ELSEWHERE IN THE TENDER. |

| 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. Similarly, if any of aforesaid items is not required for the job as per jointly agreed program, successful bidder will not be required to deploy the same. |
| 2.0 | Deployment plan of major consumables shall be jointly finalised based on project requirement prior to start of work or during progress of work. The plan might undrgo revision depending on project requirement. |

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

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

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|-----|---|---|
| Sub | No Deviation Certificate. | |
| Job | Package-A: Erection, laying/ installation, testing, commissioning, handing over, etc of C&I (control & instrumentation) systems of boiler & auxiliaries, TG & auxiliaries, station C&I, misc systems & equipment, etc of 1x660 MW unit # 3 & common systems at 2x660 MW IB-TPS, Baharpalli, Odisha. Package-B: Erection, laying/ installation, testing, commissioning, handing over, etc of C&I (control & instrumentation) systems of boiler & auxiliaries, TG & auxiliaries, station C&I, misc systems & equipment, etc of 1x660 MW unit # 4 at 2x660 MW IB-TPS, Baharpalli, Odisha. | |
| Ref | 1.0 | Tender no PSER:SCT:BNP-I1778:16. |
| | 2.0 | BHEL's NIT, vide reference no PSER:SCT:BNP-I1778:5274, Dated 24-10-2016. |
| | 3.0 | BHEL's TCN-01, vide reference no PSER:SCT:BNP-I1778:TCN-01, Dated 05-11-2016. |
| | 4.0 | All other pertinent issues till date. |

Dear Sirs,

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

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

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

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

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