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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 conflict or inconsistency between the general and technical conditions, the same shall be brought out by the bidder in writing to BHEL for clarification during pre-bid discussions, if applicable; failing which most stringent interpretation/ clause in favour of BHEL shall be adopted and the same shall be binding to the bidder. Unless otherwise

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specified, all terms & conditions shall be applicable for entire scope and for each package of the tender.

CLAUSE NO	DESCRIPTION
1.0	PROJECT SYNOPSIS AND GENERAL INFORMATION
1.1	NABINAGAR POWER GENERATING COMPANY LTD. is setting up three units of 3x660 MW Super Thermal Power Project (coal based) with FGD at Nabinagar, in Aurangabad district of Bihar, India. Nabinagar Super Thermal Power Project is located at a distance of about 15 kms. from Barun in Aurangabad district of Bihar and is approachable from NH-2 through a 20 kms (approx.) long single lane metalled road. The Aurangabad city is about 55 kms. from project site. Nearest railway station is Ankorha on Sone – Garwa Road Section of Eastern Central Railway at about 1.0 Kms. from the project site. The nearest airport at Gaya is at a distance of about 120 Kms from project site. The distances of site from Patna Airport and Varanasi Airport are about 250 Km & 220 Km respectively. NABINAGAR POWER GENERATING COMPANY LTD.) is setting up three units of 3x660 MW Super Thermal Power Project (coal based) with FGD at Nabinagar, in Aurangabad district of Bihar, India.
2.0	SITE VISIT
	The contractor should visit project site and acquire full knowledge and information about conditions prevailing at site and in & around the plant premises, together with all the statutory, obligatory, mandatory requirements of various authorities before submission of the bid.
3.0	NAME OF WORK
	Balance work of handling including receipt of materials from site stores/ open yard, arranging their issue, site transportation, temporary storage prior to erection, if required, cleaning, transportation to erection site, preservative painting, pre-assembly erection, watch and ward for safe custody of materials, inspection of materials, submission of inspection reports for any shortage/ damage or anything else called for, transportation & handing over of mandatory spare items to customer at their stores,alignment, welding, levelling, adjustment, chipping & levelling of foundation, along with completion of balance /unfinished work of alignment, welding, bolting, fixing, grouting, chipping , levelling & restoring of foundations wherever required, Completion of balance , unfinished earthing works, lightning installation work, cabling, termination, completion of electrical and C&I work in all respect, all pre-commissioning tests, commissioning, start-up and trial operation and handing over to the entire satisfaction of BHEL/ customer of total Limestone Handling System (LHS) and Gypsum Handling System (GHS) of Flue Gas Desulphurisation Plant of 3x660MW NPGCL Nabinagar TPP, Bihar
4.0	SCOPE OF WORK
4.1.1	The scope broadly covers providing labour, supervision, T&Ps, consumables etc as per technical specification and terms & conditions of tender taking into account all clarifications, confirmations and agreements till date for complete work of handling including receipt of materials from BHEL/Client's stores/storage yard, arranging their issue, site transportation,temporary storage prior to erection, if required, cleaning, transportation to site,preservative painting, pre-assembly erection, alignment, welding, leveling, adjustment, chipping & leveling of foundation,grouting, cabling, termination, completion of electrical and C&I work in all respect,including erection of free supplied material by BHEL,Handing over of mandatory spares, all pre-commissioning tests, commissioning, start-up and trial operation and handing over of Limestone Handling System (LHS) & Gypsum Handling System (GHS) of Flue Gas Desulphurisation System of 3 X 660 MW NPGCL Nabinagar FGD, Aurangabad, Bihar.
4.1.2	TYPE OF CONTRACT

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	Type of contract shall be on Lumpsum basis. The Contractor shall execute and complete the entire balance/unfinished works of Limestone Handling System (LHS) and Gypsum Handling System (GHS) in all respects, including complete erection, installation, testing, pre-commissioning, commissioning, start-up, trial operation and handing over of the LHS and GHS, in accordance with the Contract/Purchase Order (PO), approved drawings, specifications and applicable standards. The Contractor shall be responsible for all activities necessary for successful and satisfactory completion, commissioning and handing over of the LHS and GHS, including all associated works, services and requirements incidental thereto. The prices quoted for the above services shall remain firm and fixed until completion of the Contract and shall not be subject to any escalation or variation on account of increase in the cost of labour, materials, transportation, statutory levies, duties, taxes or any other input costs, except as specifically provided under the Contract.
4.2	The scope of work under these specifications includes Erection, testing, commissioning, trial operation, Assistance for PG Test & handing over of Limestone Handling System (LHS) & Gypsum Handling System (GHS) of Flue Gas Desulphurisation System which broadly consists of but not limited to following:
4.2.1	Taking delivery of the materials from the project storage yard /stores /sheds to erection site.
4.2.2	Their preservation, safe keeping, watch and ward.
4.2.3	Checking, dressing, chipping and levelling of foundations.
4.2.4	Pre-assembly, erection, alignment of various equipment's, machining and grouting.
4.2.5	Welding, heat treatment, radiography, UT and other non-destructive tests wherever required as per approved quality plan/drawings/ documents/EWS.
4.2.6	Hydraulic testing, air/gas leak test, air tightness test, other pre-commissioning tests as per approved quality plan/drawings/ documents.
4.2.7	Insulation and touch up painting including supply of paints etc.
4.2.8	Supply and application of wrapping coating material for underground piping wherever applicable.
4.2.9	Erection and dismantling of all temporary system etc. required for above operations and other commissioning activities including post commissioning operations and stabilisation of the unit,
4.2.10	Erection of Cable trays, Cabling, termination, testing and commissioning of equipment including supply of consumables like lugs, glands, cable tie, jointing kit etc required for completion of electrical and C&I work in all respect.
4.2.11	LHS & GHS system trial run, resolving any deficiencies observed and handing over the FGD system to customer M/s NTPC.
4.2.12	Approach/Platform/Canopy for equipments as per customer requirement beyond drawing/documents. Material to be supplied by BHEL on free of cost basis.
4.2.13	BHEL ISSUED MATERIAL
4.2.13.0	Bidder's scope starts from raising the requisition to BHEL's store manager, loading/unloading at site, shifting these items to erection fronts once issued by BHEL, followed by erection & commissioning, trial operation, preparation of protocols and getting signed from end customer, final painting at site after erection, carrying out performance guarantee tests (under the supervision of respective OEMs) of integrated system and handing over to NTPC until satisfactory completion and written confirmation from NTPC.
4.3.0	Tentative list of balance work is attached as Annexure -I. The scope of the Contractor shall include completion of the balance/unfinished works identified in Annexure-I and other works expressly specified in this Contract, together with all activities necessary for completion, commissioning and handing over of the LHS/GHS. In case any item necessary for completion is not specifically listed but is expressly or reasonably identifiable from the approved drawings, specifications and scope documents, the same shall be deemed included only to the extent it falls within the Contractor's defined scope.

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4.4.0	The contractor is required to erect actual tonnage (irrespective of any variation plus or minus) which may be necessary to complete their work and commission LHS & GHS system and complete the work in all respects as detailed in tender specifications. The contractor undertakes to erect / commission actual quantities as per instruction of the BHEL Engineer.
4.5.0	The customer M/s. NTPC and / or their Consultant may depute their representative for checking and supervision of important stages of work. The contractor shall be required to provide all facilities for inspection of works, without any cost implications to the BHEL. Any defect in quality of work or deviations from drawings / specifications pointed out during such inspection shall be made good by the contractor in the same way as if pointed out by the BHEL Engineer, without any cost implication to BHEL.
5.0	DEVIATIONS
	The bidder is required to submit with his offer in the relevant schedule / format without any ambiguity. Any assumptions, presumptions, deviations etc. indicated or implied anywhere by the bidder except those indicated in the deviation schedule / format will not be recognized and will not form a part of consideration / offer. In the absence of such filled-up schedule / format it will be understood and agreed that the bidder's offer is based on strict conformance to the specification and no negotiation would be allowed in this regard. BHEL reserve the right not to recognize any / all deviations submitted after opening of the bid.
6.0	DEWATERING
	Contractor shall ensure at all times that his work area & approach / access roads are free from accumulation of water, so that the materials are safe and the erection / progress schedule are not affected. No separate claim in this regard shall be admitted by BHEL. No separate payments for dewatering of subsoil, surface water or catchments water, if required, at any time during execution of the work including monsoon period shall be considered by BHEL.
7.0	GENERAL TECHNICAL REQUIREMENTS (CODES AND STANDARDS)
7.1	Except where otherwise specified, the plant / equipment shall comply with appropriate Indian Standard or an agreed internationally accepted Standard Specification as mentioned elsewhere in tender, each incorporating the latest revisions at the time of tendering. Where no internationally accepted standard is applicable, the bidder shall give all particulars and details as necessary; to enable BHEL to identify all of the plant/ equipment in the same detail as would be possible had there been a standard specification.
7.2	Where the bidder proposes alternative codes or standards he shall include in his tender 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.
7.3	In the event of any conflict between the codes & standards referred above and requirements of this specification, the requirements which are more stringent shall govern.
7.4	Tools used during erection and commissioning shall not be accepted except with the specific approval of the engineer.
7.5	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 the responsibility of the contractor.
8.0	GENERAL SERVICES TO BE RENDERED BY THE BIDDER
8.1	Deployment of all tools & tackle, construction machinery, transportation vehicles and all other implements in adequate number and size, appropriate for the construction work to be handled under scope of this specification except otherwise specified.
8.2	Providing support services for the contractor's erection staff e.g. construction of site offices, temporary stores, residential accommodation and transport to work site for erection personnel, watch and ward for security and safety of the materials under the Contractor's custody etc. as required.
8.3	Maintaining proper documentation of all site activities undertaken by the contractor as per the proforma mutually agreed with BHEL, submitting monthly progress reports as also any such document as and when desired by BHEL / owner, taking approval of all statutory

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	authorities e.g., Factory Inspector, Provident Fund authority etc. for respective portions of work under the jurisdiction of such statutes of laws.
8.4	As part of overall project management activity, the contractor shall be responsible for proper co-ordination of construction activities during various phases of execution of the contract. The contractor 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 the single point contact person on behalf of the contractor. BHEL shall interact with the construction manager only on all matters on co-ordination between BHEL and the contractor. For timely completion of work, the contractor may have to work in one or more shifts. Contractor will not be eligible for any extra charge on this account.
8.5	The contractor shall confine all his field 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 the contractor under conditions which might adversely affect the quality and efficiency thereof, unless special precautions or measures are taken by the contractor in proper and satisfactory manner in the performance of such works and with the concurrence of the engineer. Such unfavourable construction conditions in no way relieve the contractor of his responsibility to perform the works as per the schedule.
8.6	The contractor shall supply all skilled, semi-skilled and unskilled workmen required for all works of handling and transportation from site store to erection site, erection, testing and commissioning contemplated 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 reserve the right to decide on the suitability of the workers and the other personnel who will be employed by the contractor. BHEL reserves the right to insist on removal of any employee of the contractor at any time, if they find him unsuitable and the contractor shall forthwith remove him.
8.7	The supervisory staff employed by the contractor 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 the contractor 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 contractors of BHEL and BHEL's client.
8.8	The contractor shall also furnish daily manpower report showing by classification the number of employees engaged in various categories of work a progress report of work as required by BHEL engineer.
8.9	The work shall be executed under the usual conditions affecting major power plant construction and in conjunction with numerous other operations at site. The contractor and his personnel shall co-operate with other personnel, and other contractors, co-ordinating his work with others and proceed in a manner that shall not delay or hinder the progress of work as a whole.
8.10	The contractor'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. The contractor 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.
8.11	It is the responsibility of the contractor to engage his workman in shifts or on overtime basis for achieving the target set by BHEL during erection, commissioning and testing period. Contractor's quoted rate shall include all these contingencies.
8.12	Any other service, although not specifically called for but required for a contract of the size and nature indicated in the specification.
9.0	PROTECTION
9.1	Equipment having anti-friction or sleeve bearings 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.
9.2	Electrical equipments, controls and instrumentations shall be protected against moisture and water damages. All external gasket surfaces and flange faces, couplings, rotating

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	equipment shafts, bearings and like items shall be thoroughly cleaned and coated with rust preventive compound and protected with suitable wood, metal or other substantial type covering to ensure their full protection. All exposed threaded parts shall be greased and protected with metallic or other substantial type protectors
9.3	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.
9.4	All other consumables to be supplied by the contractor within the quoted rate.
10.0	GENERAL GUIDELINES FOR FIELD ACTIVITIES
10.1	The contractor 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.
10.2	The contractor shall co-operate with owner / BHEL and other contractors working in site and arrange to perform his work in a manner so as to minimise interference with other contractor's works. BHEL's engineer shall be notified promptly of any defect in other contractors' works that could affect the contractor's work. If rescheduling of contractor's work is requested by the owner's / BHEL's engineer in the interest of overall site activities, the same shall be complied with by the contractor. In all cases of controversy, the decision of BHEL shall be final and binding on the contractor without any commercial implication.
10.3	The BHEL engineer shall hold weekly meeting of all the contractors working at site at a time and a place to be designated by the engineer to discuss interface issues. The contractor 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 contractors or with selected number of contractors and in such a case the contractor, if called will also attend such meetings.
10.4	Time is the essence of the contract and the contractor shall be responsible for performance of his work in accordance with the specified construction schedule. If at any time the contractor 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. The contractor shall not be allowed any extra compensation for such action.
10.5	The engineer shall however not be responsible for provision of additional labour and or materials or supply of any other services to the contractor except for the co-ordination work between various contractors as set out earlier.
10.6	The works under execution shall be open to inspection & supervision by BHEL's / Owner's engineer at all times. The contractor 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 owner/ BHEL.
10.7	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's engineer. Manufacturer's interpretation in such cases shall be binding on the contractor.
10.8	The contractor 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 the contractor shall be to his account.
10.9	Equipment and material, in case wrongly installed, shall be removed and reinstalled to comply with the design requirement at the contractor expense, to the satisfaction of BHEL / owner.
11.0	QUALITY CONTROL & QUALITY ASSURANCE
11.1	INSPECTION & FIELD QUALITY ASSURANCE

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11.1.1	Contractor shall carry out all activities conforming to the approved Field Quality Plan (FQP) & technical instructions as revised from time to time. 'Total Quality' shall be the watchword of the work and contractor shall strive to achieve the quality standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and quality standards. Contractor shall provide the services of quality assurance engineer as per the relevant clauses.
11.1.2	Preparation of quality assurance log sheets and protocols with customer / consultants / statutory authority, welding logs, NDE records, testing & calibration records and other quality control and quality assurance documentation as per BHEL engineer's instructions, is within the scope of work / specification. These records shall be submitted to BHEL / customer for approval from time to time.
11.1.3	The protocols between contractor and customer / BHEL shall be made for correctness of foundations, materials, procedures, at each stage of installation, generally as per the requirement of customer / BHEL. This is necessary to ensure elimination of errors and to avoid accumulation and multiplication of errors.
11.1.4	A daily log book (with proper indexing) should be maintained by every supervisor / engineer of contractor, for respective area of work, on the job for detailing and incorporating alignment/ clearance / centering / levelling readings and inspection details of various equipment, etc. This log book shall be always accessible to BHEL engineers. High pressure welding (as applicable under the scope of this contract) details like serial number of weld joints, welders name, date of welding, details of repair, heat treatment etc. will be documented in welding log as per BHEL Engineer's instructions. Record of radiography (as applicable under the scope of this contract) containing details like serial number of weld joints, date of radiography, repairs, if any, re-shots etc shall also be maintained as per BHEL Engineer's instructions. Record of heat treatments (as applicable under the scope of this contract) performed shall be maintained as prescribed by BHEL.
11.1.5	The performance of welders (as applicable under the scope of this contract) will be reviewed from time to time as per the BHEL standards. Welders' performance record shall be furnished periodically for scrutiny of BHEL's Engineer. Corrective action as informed by BHEL shall be taken in respect of those welders not conforming to these standards. This may include removal/ discontinuance of concerned welder(s). Contractor shall arrange for the alternate welders immediately.
11.1.6	Only welders duly authorized by BHEL / customer / consultant after welder qualification test as per ASME Sec-Ix / AWS D1.1 (as applicable) shall be engaged on the work. All the welders shall carry identity cards as per the proforma prescribed by BHEL / Customer / Consultant.
11.1.7	Any re-laying or re-termination of cables / re-erection of instruments / recalibration of instruments etc. required due to contractor's mistake and found at any stage inspection shall be carried out by the contractor at no extra cost. Repair / rectification procedure to be adopted to make any job acceptable shall be subject to the approval of BHEL.
11.1.8	Weekly Quality Review Meeting at site shall be organised by BHEL to discuss quality issues and next weeks inspection plans. Site in-charge of the contractor along with QAEs of the contractor must be present in the meeting with closure report of the issues raised by BHEL in the previous meetings.
11.1.9	Organization chart of contractor staffs deployed with roles and responsibilities to be submitted to BHEL.
11.1.10	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 the successful bidder in earning satisfactory performances of equipment/ service as per specification.
11.2	REQUIREMENT OF ISO 9001
11.2.1	BHEL: PSER is accredited with ISO 9001 certification and as such this work is subject to various audits to meet ISO 9001 requirements.
11.2.2	The basic philosophy of the Quality Management System under ISO 9001 is to define the organizational responsibility, work as per documented procedures, verify the output with

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	respect to acceptance norms, identify the non-conforming product / procedure and take corrective action for removal of non-conformance specifying the steps for avoiding recurrence of such non-conformities, & maintain the relevant quality records. The non-conformities are to be identified through the conduct of periodical audit of implementation of quality systems at various locations/stages of work. Suppliers / vendors of various products / services contributing in the work are also considered as part of the quality management system. As such the contractor is expected not only to conform to the quality management system of BHEL but also it is desirable that they themselves are accredited under any quality management system standard.
11.2.3	BHEL reserves the right to carry out quarterly quality audits and quality surveillance of the systems and procedures of contractor's quality management. Contractor shall provide all necessary assistance to enable BHEL to carry out such audit & surveillance.
11.2.4	Quality audits / approval of the results of test & inspection will not prejudice the right of BHEL to reject an equipment service not giving desired performance and shall not in no way limit the liabilities and responsibilities of the contractor in earning satisfactory performances of equipment / service as per specification.
11.3	MMEs / MMRs
11.3.1	Contractor shall ensure deployment of reliable and calibrated MMEs (Measuring and Monitoring Equipment). The MMEs shall have test / calibration certificates from authorised / Government approved / Accredited agencies traceable to National / International Standards. Re-testing / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the contract price. The contractor will also have alternate arrangements for such MMEs so that work does not suffer when the particular equipment / instrument is sent for calibration. Also, if any MMEs not found fit for use, BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall i.e. repeat the readings taken by that instrument, failing which BHEL may deploy MME and retake the readings at Contractor's cost.
11.3.2	Contractor shall provide all the Measuring Monitoring Equipment (MMEs) required for completion of the work satisfactorily. These MMEs shall be of brand, quality and accuracy specified by BHEL Engineer and should have necessary calibration and other certificates as per the requirement of BHEL Engineer. Decision of BHEL Engineer regarding acceptance or otherwise of the measuring instruments / gauges / tools for the work under this specification, is final and binding on the contractor. BHEL shall give an indicative list of MMEs required for this work else where in this contract and to be made available by the contractor. The list will be reviewed by BHEL site as per the requirement of approved FQPs and the contractor shall meet any augmentation needed wherever required.
11.3.3	It is the responsibility of the contractor to prove the accuracy of the testing / measuring / calibrating equipment brought by him based on the periodicity of calibration as called for in the BHEL's quality assurance standards/BHEL Engineer's instructions.
11.3.4	Re-work necessitated on account of use of invalid MMEs shall be entirely to the contractor's account. He shall be responsible to take all corrective actions, including resource augmentation if any, as specified by BHEL to make-up for the loss of time.
11.3.5	In the courses of erection, it may become necessary to carry repeated checks of the work with instruments recently calibrated, re-calibrated. BHEL may counter / finally check the measurements with their own MMEs. Contractor shall render all assistance in conduct of such counter / final measurements.
11.4	INSPECTION BY TS / FES / QA ENGINEERS OF BHEL UNITS / ENGINEERING CENTRES
11.4.1	Apart from day-to-day inspection by BHEL Engineers stationed at Site and Customer's Engineers, stage inspection of equipment under erection and commissioning at various stages may also be conducted by teams of Engineers from Field Engineering Services of BHEL's Manufacturing Units, Quality Assurance teams from Field Quality Assurance, Unit/Factory Quality Assurance and Commissioning Engineers from Technical Services etc. Contractor shall arrange all labour, tools and tackles etc along with proper access for such stage inspections free of cost.

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11.4.2	Any modifications suggested by BHEL FES and QA Engineers' team shall be carried out. Claims of contractor, if any, shall be dealt as per applicable clause of the contract, and provided such modifications have not arisen for reasons attributable to the contractor.
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11.5	PENALTIES ON VENDORS / SUB-CONTRACTORS AGAINST NON-COMPLIANCE OF QUALITY NORMS
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List of Penalties on Violations on Quality Provisions

Sr no	Violation	Penalty in Rs
1	Mother oven not working	500 per day & ban on its use
2	Slackness in control over baking of welding electrodes (Doc.)	200 per incident
3	Holding oven not working/plugged in	500 per incident/day & ban its use
4	Portable oven not working/Plugged in	100 per incident & welder to be sent home
5	Use of cold electrodes (Except E6013)	1000 per incident & welder to be sent home
6	Unauthorized welder on job	5000 per incident & welder to be sent home
7	Delay in NDT Agency deployment w.r.t jointly agreed Ere. Prog	500 per incident
8	Failure to monitor Welder's Performance (RT, SR, Penalty Joint etc.)	5000 per week
9	Improper acts w.r.t maintain SR Charts	10000 per incident
10	Site Welding/QLY Engineer not deployed w.r.t mutually agreed Ere. Plan	500 per day
11	Delay in (RT, SR, UT) report submission & customer acceptance Log sheets esp. for Billed qty. from dt. of Billing (Vendor)	10,000 per week
12	Lack of safe approach Scaffolds/Platform for inspection & non-availability of calibrated MMDs –	1000 per incident.

12.0	HEALTH, SAFETY & ENVIRONMENT
12.1	Vendor has to follow HSE norms at project site during execution of entire contract period. The applicable HSE norms are noted in Tender Document for HSE norms having Document Title: HEALTH, SAFETY AND ENVIRONMENT PLAN FOR SITE OPERATIONS BY SUB-CONTRACTORS". Refer Document Number: HSEP14 Rev.: 02, DATE: 21.12.2022 shall also be complied by bidder.

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13.0	LAND
13.1	Availability of land within plant boundary is very limited and the contractor has to plan & use the existing land considering the use of land by other contractors and the storage of plant machineries and materials. The existing land shall be shared by all erection agencies. The same will be reviewed by BHEL and allotted to the extent available/ considered necessary free of cost. Contractor shall develop these areas for their site office, their own stores etc. Bidder must visit site to assess site condition, prior to quoting.
13.2	Levelled area for storage of BHEL's material shall be provided as per availability free of cost.
13.3	Land for labour colony shall be arranged by successful bidder at their own. The contractor shall construct labour colony / hutment as per his requirements after obtaining approval of formalities from statutory body. Further, contractor must ensure minimum HSE norms and hygienic sanitary conditions in his labour colony.
13.4	The contractor will be responsible for handing back all lands, as handed over to him for his temporary use, after proper dismantling of establishment, levelling etc. as per instruction of BHEL /Customer engineer.
14.0	WATER
14.1	BHEL will provide single point supply for construction & drinking water inside the project premises for office free of cost.
14.2	Further necessary network for construction & drinking water system shall be done by the bidder at his own cost.
14.3	Contractor should arrange for water for labour colony of their own.
14.4	BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of water supply and the contractor shall claim no compensation for delay in work for such interruption. Contractor may make standby arrangement for water at their own cost.
14.5	Contractor will have to arrange for storage of water to meet the day-to-day requirement.
14.6	The availability of water (construction as well as drinking) may be limited. Contractor shall ensure that no water is wasted. In this regard the contractor shall take all necessary measure towards preservation of water.
15.0	ELECTRICITY
15.1	BHEL shall provide construction power free of charge at 415V level at one point. Contractor has to make their own distribution arrangement to draw electricity. Overall area illumination will be provided by BHEL. However, for night working contractor should arrange illumination as and when required by them.
15.2	The bidder shall have to provide earth leakage circuit breaker at each point wherever human operated electrical drives/ T&Ps are deployed.
15.3	The power supply will be from the available grid. BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of power supply/ variation in voltage level and no compensation for delay in work can be claimed by the contractor due to such non-supply on the grounds of idle labour, machinery or any other grounds.
15.4	Bidder will have to arrange sufficient illumination at their own work areas.
15.5	The contractor should ensure that the work in critical areas is not held up in the event of power breakdown. In the event of breakdown in the electric supply, if the progress of work is hampered, it will be the responsibility of the contractor to step up the progress of work after restoration of electric supply so that overall progress of work is not affected.
15.6	The contractor shall have to make arrangement at their own cost for illumination that will be required in the working area for execution of the work & safety of workmen.
15.7	Contractor shall make arrangement of electricity of their own for labour colony.
16.0	CONSUMABLE
	1. All the required electrodes (in Contractor scope) as approved by BHEL shall be arranged by contractor at his cost. It shall be the responsibility of the contractor to obtain prior approval of BHEL site, before procurement regarding, suppliers, type of electrodes etc. On receipt of the electrodes at site, it shall be subject to inspection

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	and approval by BHEL. The contractor shall inform BHEL details regarding type of electrodes, batch number and date of expiry etc. 2. The contractor shall provide within finally accepted price, all consumables like welding electrodes (including alloy steel and stainless steel), all gases (inert, Nitrogen Gas for accumulators and Gases required for welding, and cutting), soldering material, dye penetrants, radiography films, water soluble paper. Other erection consumables such as tapes, jointing compound, grease, mobile oil, M-seal, Sodium silicate, Araldite, petrol, CTC / other cleaning agents, grinding and cutting & buffing wheels are to be provided by the contractor. 3. Steel, H&S, packers, shims, wooden planks, scaffolding and pre-assembly materials (structural steel, concrete sleeper, concrete blocks etc.) hardware items etc. required for temporary works such as supports, scaffoldings, pre-assembly bed etc. can be issued from BHEL at its discretion on returnable basis subject to availability with BHEL site store. In case of non-availability same has to be arranged by agency. Nitrogen cylinders required for Acid cleaning, Oil Accumulator filling & other Commissioning activities are in the scope the bidder, If required. 4. All the required gases like Oxygen / Acetylene / argon / Nitrogen required for work shall be supplied by the Contractor at his cost. It shall be the responsibility of the contractor to plan the activities and store sufficient quantity of these gases. Non-availability of gases cannot be considered as reason for not attaining the required progress. BHEL reserves the right to reject the use of any gas in case required purity is not maintained. 5. The contractor shall ensure safe keeping of the inflammable cylinder at a separate place away from normal habit with proper security etc. 6. Shortage of any of the electrodes or the equivalent suggested by BHEL shall not be quoted as reason for deficiency in progress or for additional rate. 7. All low hydrogen electrodes shall be baked / dried in the electrode drying oven (range 375 deg. C - 425 deg. C) to the temperature and period specified by the BHEL Engineer before they are used in erection work and each welder should be provided with one portable electrode drying oven at the work spot. Electrode drying oven (Baking & holding oven) and portable drying ovens shall be provided by contractor in sufficient quantities at his cost. 8. In case of improper arrangement of procurement of above electrodes BHEL reserves the right to procure the same from any source and recover the cost from the contractor's subsequent bills at market value plus 5% overheads. 9. BHEL reserves the right to reject the use of any electrodes at any stage, if found defective because of bad quality, improper storage, date expiry, unapproved type of electrodes etc. It shall be the responsibility of the contractor to replace at his cost without loss of time. 10. Sealing compounds and GI wires for insulation mattress binding and Self drilling screws / Self taping screws for sheeting works (Al Cladding sheet, Corrugated sheets and other ribbed sheet for the roof and weather protection areas) shall be provided by the agency within the quoted price/rates. However, if these are supplied by the BHEL MUs then same will be issue free of charges to contractor. 11. All Materials, including structural steel, shall be procured from the CUSTOMER approved sources only. 12. All consumables to be used for the job shall have to be approved by NTPC / BHEL prior to use.
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	13. In the event of failure of contractor to bring necessary and sufficient consumables, BHEL may arrange for the same at the risk and cost of the contractor. The entire cost towards this along-with overhead shall be deducted from the contractor's bills
17.0	TEST CERTIFICATES
	Necessary test certificates of all materials supplied by contractor are to be produced to BHEL prior to use of those materials.
18.0	PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT
	To meet the need of construction management at site, contractor shall provide the following services within quoted / accepted rates.
18.1	PLANNING & MONITORING
18.1.1	The bidder shall prepare detail construction schedule (L-3) as per completion dates given in this document. This schedule must include all milestone and key activities for each sub-system / component in the areas of engineering (wherever applicable), procurement, manufacture (wherever applicable), excavation/ construction/ erection. This network must conform to the overall project schedule. The bidder should also ensure monitoring of these activities at least weekly basis to start with and on daily basis whenever required by BHEL.
18.1.2	The bidder shall also 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 preferably made in PRIMAVERA/ MS PROJECTS, so that the same is compatible with BHEL's project management software.
18.1.3	The bidder will have to Supply & install of 1 No. PC (multimedia PC work station Pentium-Core-i5-650, 3.2 GHZ or above, 1 TB HDD, 8 GB RAM, 100 /1000 MBPS LAN card) of HP / HCL / COMPAQ / LENEVO or equivalent make with window 10 or higher, 64 bit (with roll back to 32 bit O/S and required software like MS Office 2016 or higher, AutoCAD 2014 or higher, ADOBE PDF CREATOR with 1 no. Multifunction Colour Printer with scan, copy and print option as per instruction of BHEL for exclusive use of BHEL. Periodic refilling of cartridge (as & when required) is also included in bidder's scope without additional cost implication to BHEL. These computer / Multifunction printers shall remain Vendor's property and they will be allowed to take out the same after completion of the work. The contractor shall provide data / information etc. in prescribed formats for periodical updating of the progress reports, material management reports, updating of network pertaining to the contractor's scope of work etc. The contractor shall also provide 1 (One) Number computer operator and 1 (One) number service staff for miscellaneous service for BHEL's use at site / Kolkata for reconciliation, progress review & day-to-day planning purpose, documentation etc. Above facilities are to be provided within 30 days from the date of intimation by CM/BHEL, till completion of scheduled contract period. If contractor fails to provide computer / printer / personnel as per requirement, for a continuous period of fifteen days or more, BHEL shall have the right to deduct the amount as per following rates on prorated basis, from contractor's RA bill or any other dues.
18.1.3.1	At actual (rate +30%) if BHEL arranges this facility.
18.1.3.2	At actuals (rate +30%) if BHEL arranges this facility.
18.1.3.3	For each set of computer & printer, at actuals (rate +30%) if BHEL arranges this facility.
18.1.3.4	In the event of the contract period getting extended beyond the stipulated time for reasons not attributable to the bidder and if the services of computer operator (Skilled) & Service staff (unskilled) are being used by BHEL then successful bidder shall be reimbursed by minimum wages with statutory benefits +15%. No reimbursement shall be given on account of Computer and Printer during extended period of the contract.
18.1.3.5	The contractor's site office must have adequate facilities of communications like E-mail, and telephone / mobile phones etc.

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18.2	PROGRESS REPORTING
18.2.1	The bidder shall submit daily, weekly and monthly progress reports for work force, materials reports, consumables (gases/electrodes) report and other reports as per pro-forma considered necessary by the BHEL. In case of any failure on contractor's part to comply with this, BHEL may at its discretion, consider to withhold part payment against their RA bills.
18.2.2	The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which the contractor 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.
18.2.3	The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged.
18.2.4	Weekly progress review meetings will be held at site during which actual progress during the week vis-à-vis scheduled program shall be discussed or actions to be taken for achieving targets. For discussions, the contractor shall present program of subsequent week. The contractor shall constantly update/revise his work program to meet the overall requirement.
18.2.5	Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of bidder will be held once in a month at Kolkata / Site. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.
18.2.6	DELETED
18.2.7	Successful bidder has to provide for electronic/ computerized storing and re-production/ printing/ plotting of various data, log sheets, protocols, measurements etc. These may be stored in Pend Drive /CD / Hard Disk (as per requirement) and handed over to BHEL as per requirement.
18.2.8	Unless otherwise directed by PMX-BHEL Kolkata or Construction Manager- BHEL site, each month success ful bidder will submit jointly signed monthly planning, delay analysis in BHEL format (Form 14 format will be given by BHEL Site)
18.3	SITE ORGANIZATION
18.3.1	The contractor shall provide adequate staffing in the following areas in addition to the staffing requirements of execution as instructed/informed by BHEL: 1. Overall planning, monitoring & control. 2. Quality control and quality assurance 3. Materials management. 4. Safety, fire & security. 5. Industrial relations and fulfilment of labour laws and other statutory obligations. Strength of various qualified person shall be decided jointly in consultation with Site in charge, BHEL.
18.3.2	The contractor shall maintain a site organization of adequate strength in respect of manpower, construction machinery and other implements at all times for smooth execution of the contract. This organization shall be reinforced from time to time, as required to make up for slippage from the schedule without any commercial implication to BHEL. The site organization shall be headed by a competent construction manager having sufficient authority to take decisions at site.
18.3.3	On award of contract, the contractor shall submit to BHEL site organization chart indicating the various levels of experts to be deployed on the job. BHEL reserves the right to reject or approve the list of personnel proposed by the Contractor. The persons, whose bio-data have been approved by BHEL, will have to be posted at site and deviations in this regard will not generally be permitted.

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18.3.4	The contractor should also submit to BHEL for approval a list of construction equipment, erection tools, tackle etc prior to commencement of site activities. These tools & tackles shall not be removed from site without written permission of BHEL.
18.3.5	The organization chart for site should indicate the various levels of experts to be posted for supervision in the various fields in erection, commissioning etc as applicable. For proper supervision of the work, the contractor shall ensure providing one qualified supervisor against deployment of 15 workmen.
18.4	CONSTRUCTION MANAGEMENT
18.4.1	Based on the approved program, the contractor 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. The contractor shall also be involved along with NTPC / BHEL to tie up detailed resources mobilization plan over the period of the contract matching with the performance targets.
18.4.2	The program would be jointly finalized by the site in-charge of the contractor with BHEL/ NTPC's project coordinator as well as the site-planning representative. The erection program will also identify sequential events matching financial turnover.
18.5	ERECTION CLAUSE
18.5.1	Contractor shall submit within 10 days of LOI date, detailed program (L2 schedule) of construction / erection / commissioning along with matching resources T&P deployment and manpower deployment schedule for approval to Site In- Charge. L2 schedule shall be the working level document demonstrating contractor's ability and methods of completing the work within the key milestones identified in the tender specification. These programs would be amplified showing start of erection and subsequent activities and shall form the basis for site execution and detailed monitoring. The three-monthly rolling program with the first month's program being tentative based on the site conditions would be prepared based on these programs. The Contractor shall also be involved along with the Customer/BHEL to tie up detailed resource mobilisation plan over the period of time of the contract matching with the performance targets.
18.5.2	The program would be jointly finalised by the site in-charge of the contractor with BHEL /Customer's project coordinator as well as the site planning representative. The erection program will also identify the sequential erectable tonnages
18.5.3	Contractor shall submit daily work program based on above schedule. Deferment of above schedule is not acceptable. Contractor will adhere to schedule & augment resources to ensure completion as per schedule.
18.5.4	1. The works to be performed under this contract consist of providing all labour, supervision, material, scaffolding, construction equipment, tools & plants, temporary works, supplies including POL, transportation and all incidental items not shown or specified but reasonably implied or necessary for the proper completion of work in all respects. Testing of all materials etc. are included on the rates of items of work. Works shall be carried out only with approved drawings. Bidder's quoted rates shall include all material equipment, fixtures, labour construction plant, temporary works and everything whether of permanent or temporary nature necessary for the completion of job in all respects. 2. The work fronts required for the erection and installation of equipment shall be made available to the Contractor in a phased manner, depending upon site readiness and other relevant project requirements. 3. The bidder should fully apprise himself of the prevailing conditions at the proposed site, climatic conditions including monsoon pattern, local conditions, soil strata and site-specific parameters and shall include for all such conditions and contingent measures in the bid, including those which may have not been specifically brought out in the specifications. Declaration already provided in Forms and Procedure. 4. It shall be specially noted that, the contractor may have to work round the clock (24x7) or may have to deploy additional manpower/resources to achieve the

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	completion schedules / plans / targets during the entire course of erection and commissioning works, which may involve considerable payment including overtime. Hence, contractor's quoted rate shall take into consideration of all expenses that will be incurred for such arrangement of personnel including labours, engineers / supervisors, T&Ps etc. Time is the essence of contract. Night shift working is envisaged for works not hazardous in nature with due permission of BHEL like- Erection works at low heights, Material shifting, Preassembly works, welding works etc. 5. The terminal points can be inferred from the relevant drawings and any further clarifications can be obtained/decided by BHEL at site and that is final and binding on the contractor for deciding the scope of work and effecting the payment for the work done up to the terminals. Carrying out work as per the specification between equipment constituting terminal points, whether the terminal equipment fall within the scope of work/specification, contractor shall carry out the terminal joints at either end. Also, wherever the piping connection to the terminal points involve flanged joints, matching of flanges, fixing gaskets, bolting and tightening as per BHEL Engineers instructions is in the scope of work. In case, piping connected to equipment, matching of flanges for achieving the parallelism and alignment at the equipment end, by suitably resorting to heat correction or other method as instructed by BHEL Engineer, is within the quoted rate. 6. Considering the area constraint in the subject project, Contractor has to work in close co-ordination with another Erection/Civil agency at site. BHEL engineer will co-ordinate area clearance. In a project of such magnitude, it is possible that the area clearance may be less/more at a particular given time. Activities and erection program have to be planned in such a way that the project milestone events like ATT, Gas-In, etc., are achieved as per schedule/ plans. Contractor shall arrange & augment the resources accordingly. 7. No member of the already erected structure/ platform, pipes, grills, platform, other component and auxiliaries should be cut without specific approval of BHEL engineer. In case it is necessary to cut, the contractor shall rectify / repair in a manner acceptable to BHEL / Customer without any additional cost. 8. The storage yards are located within the plant boundary at multiple locations which shall be intimated during course of work. All other materials have to be transported from storage yard to construction area by the contractor at his own cost, using own Pick & Carry Crane (Farrana), crane and trailer. 9. The scope of work covered under this specification is of highly sophisticated nature, requiring the best quality workmanship, engineering and construction management including high standard safety management (as per relevant clause of tender document) and green belt management (Project Management, HSE & Quality etc.). The contractor should ensure successful and timely completion of the work. The contractor must have adequate quantity of tools, construction aids, equipments etc., in his possession. He must also have on his payroll adequately trained, qualified and experienced supervisory staff and skilled personnel. The manpower deployment identified by contractor shall match with above scope of works. (Refer HSE Plan). Contractor shall execute the work as per sequence and procedure prescribed by BHEL at site. The erection manuals which are available with BHEL site office are to be referred for compliance and guidance before taking up the work. Any failure to comply with the above might lead to rework and the cost for the same shall be borne by the contractor only. BHEL engineer, depending upon the availability of materials, fronts etc., will decide the sequence of erection and methodology. No claims for extra payment from the contractor will be entertained on the grounds of deviation from the method of erection adopted in erection of similar jobs or for any reason whatsoever. 10. Furnishing samples of all materials required by the engineers for testing/inspection and approval for use in the works. The samples may be retained by the engineer for final incorporation in the works.
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	11. Furnishing test reports for the products used or intended to be used, if called for the specifications or if so desired by the engineer. 12. Giving all notices, paying all fees, taxes, statutory clearances, license (like T&P load test, etc), etc., in accordance with the general conditions of contract, that is required for all works including temporary works. 13. Arranging manufacturer's supervision for items of work done as per manufacturer's specifications when so specified. 14. The contractor shall provide the owner/BHEL such an assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used. 15. Providing all incidental items not shown or specified but reasonably implied or necessary for the successful completion of the work in accordance with contract. 16. Arranging for joint checking (with BHEL / BHEL's Customer / Consultant) of all site construction activities Preparation of joint protocols for each & every activity and maintaining quality records for audit/inspection as per approved FQP by BHEL. 17. This is to be noted that the drawings and the documents furnished along with this specification are the sole property of BHEL. It must not be used directly or indirectly in any way detrimental to the interest of the company. 18. The scope of work will also include such other related works although they may not be specifically mentioned above and all such incidental items not specified but reasonably imply and necessary for completion of the job as a whole all as desired and as directed by the engineer. 19. The detail scope of work covered above is not a comprehensive list of items of work involved. The detail scope of work may vary considerably depending on the actual requirements. 20. Adequate lighting facilities such as flood lamps, hand lamps and area lighting shall be arranged by the contractor at the site of construction, pre-assembly yard and contractor's material storage area etc. at his cost. 21. Adequate water-less/Bio urinals (as per HSE plan) at locations identified by BHEL site in-charge, shall be arranged by the contractor within quoted rates, at site of construction at different level and different areas with proper disposal arrangement. 22. Vendors have to comply requirements of HSE & Statutory requirement in line with BHEL HSE plan, NTPC Safety requirement, State/Central statutory requirement. 23. Preparation of method statement, HIRA, Job Safety analysis, permit to work, lifting plans, and all supporting documents as required for starting & continuation of work/job is in vendor's scope. 24. The items damaged due to improper storage and transportation from storage yard to erection site are to be rectified before installation free of cost. 25. Scaffolding pipes, clamps, safety nets, floor grills for working platforms are to be made of good quality with proper certifications as per IS Codes. 26. No compensation or payment towards idling of resources shall be admissible,
19.0	TOOLS & PLANTS (TO BE PROVIDED BY CONTRACTOR)
19.1	1. Agency shall Mobilize / de-mobilize/ re-mobilise the Tools & Plants as per site requirement as per BHEL instruction without any extra cost to BHEL. 2. Number of T&Ps to be deployed at site shall be decided w.r.t. monthly plan and review format (F-14) on site requirement. 3. Required T&Ps are to be deployed by contractor as and when required as per instruction of BHEL engineer. If works gets delayed due to non-availability of above T&Ps, BHEL reserves the right to deploy the same and recover the charges thereof from the contractor including applicable overhead charge of 30%. 4. Any Heavy Equipment (cranes, winch machine, etc.) manufactured less than 15 Years from the current Year shall be only allowed to be used at project Site. Pre-safety Inspection of the equipment by safety deptt. shall be done before mobilizing the equipment at our project site.

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	5. Necessary electrical / water / air connection required for operation of any of the tools & tackles shall be to Contractor's account. 6. Contractor has to submit the Calibration certificates of all the precision equipment to BHEL. BHEL may ask for recalibration of the MMEs /precision equipments for ensuring quality of work. Contractor must re-asertain/ recheck range and accuracy of each IMTE from BHEL Engineer well in advance before arranging calibration/ deployment. 7. All Measuring and Monitoring Devices (MMD) used for the work in scope of these tender specifications shall be calibrated by the accredited agencies that are approved by BHEL or calibration tractability is established up to National Physical Laboratory. 8. Contractor has to arrange slings of all sizes for completing the works covered under these specifications. 9. In the event of need of change of type of any of major T&Ps, approval shall be taken from BHEL Engineer in-charge prior to mobilization. The decision of Number of T&P required due to replacing the enlisted T&P as per above table, shall be taken after analysing the production capacity and suitability of both the T&Ps. 10. The contractor shall submit the valid test certificate/calibration certificates for all the T&Ps before put into actual use at site. The certificates shall be renewed time to time as instructed by BHEL Engineer. 11. Crane operators deployed by the contractor shall be offered for testing by BHEL before they are allowed to operate the cranes. 12. If the work related to T & Ps mentioned above is completed then, BHEL can release that T&P during contract period / extended period (if any). However, written permission shall be taken by contractor from BHEL Construction Manager and gate pass formalities shall be followed by the contractor for releasing the T&P. 13. All operators (for crane, winch etc.) deployed by contractor shall have valid licence from applicable authority (which ever applicable). Hydras are not permitted for the scope of work. Contractor shall deploy and use pick & carry crane of TRX or equivalent type only for the above purpose. Tandem operation towards material handling is also not permitted in the project premises.
20.0	TOOLS & PLANTS (TO BE PROVIDED BY BHEL ON SHARING BASIS)
20.1	No Tools & Plants (T&P) shall be provided by BHEL.
21.0	INSURANCE
21.1	BHEL shall arrange comprehensive MCE (marine cum erection) Insurance Policy for total project supply & services including balance of plant package covering transit risks & loss, destruction or damage during handling at Site, Storage, civil works, erection, testing and commissioning up to trial operation completion of unit including theft, sabotage, fire, lightning and other natural calamities.
21.2	Contractor shall report to BHEL in writing any damages to equipment/components on receipt, storing, and during withdrawal of the materials from stores, in transit to site and unloading at place of work and during erection and commissioning till trial operation completion including handing over. The above report shall be as prescribed by BHEL site management. Any consequential loss arising out of non-compliance of this stipulation will be borne by contractor.
21.3	The contractor will take necessary precautions/ due care to protect the material at Project site, while in his custody from any damage/ loss till the same is handed over to BHEL/ customer at Project site. For lodging/ processing of insurance claim the contractor will submit necessary documents. BHEL will reserve the right to recover the loss from the contractor as detailed below in case the damage/loss is due to negligence/ carelessness on the part of the contractor. In case of theft of material under contractor's custody, the same shall be reported to police by the contractor immediately and copy of FIR and subsequently police investigation report shall be submitted to BHEL/ customer for taking

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	up with insurance. However, this will not relieve the contractor of his contractual obligation for the materials in his custody.
21.4	In case the damage/loss/theft of materials are attributable to negligence/failure in discharging the duties and obligations of the contractor, the expenses incurred for repair/replacement of such components in excess of the amount realized from the underwriters, limited to Normal Excess (Deductible Franchise) shall be recovered from the contractor.
21.5	Insurance of manpower deployed by the agency shall be insured by the agency itself.
21.6	Other conditions of Insurance shall be as per relevant clause of GCC/SCC.
22.0	RECONCILIATION OF BHEL ISSUED MATERIALS
22.1	The contractor shall submit a reconciliation statement of steel issued to him, once in a month. The same may be submitted alongwith RA bill.
22.2	At the time of submission of bills, the contractor shall properly account for the material issued to him as specified herein to the satisfaction of BHEL certifying that the balance materials are available with contractor's custody at site.
22.3	At the time of submission of bills by the contractor, 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.
22.4	The approved drawings are to be considered for the purpose of reconciliation of materials.
22.5	Reconciliation of steel shall be done on total issue & consumption basis.
23.0	TIME SCHEDULE
23.1	After issue of LOI/ LOA (though Fax/courier/email) the contractor shall mobilize at site within Two weeks (14 days) from the date of intimation from BHEL. The actual date of start of work, to fix up the zero date of the contract, will be certified by BHEL Engineer after adequate mobilization of manpower and T&Ps by the contractor.
23.4	The contractor shall plan his work in such a manner so as to meet the overall project schedule, in consultation with BHEL/ customer engineer.
23.5	Contractor shall submit daily work program based on above construction schedule.
24.0	COMPLETION PERIOD
24.1	The entire work under this scope shall be successfully completed in all respect within 09 (nine) months from the date of start of work as certified by Construction Manager, BHEL.
24.2	Contractor shall mobilise resources to start the work within 14 days from date of intimation of BHEL.
24.3	However, actual date of start of work shall be reckoned based on certification of Construction manager,
25.0	LIQUIDATED DAMAGE/ PENALTY
25.1	If the contractor fails to maintain the required progress of work which results in delay in the completion of the work as per the contractual completion period, BHEL shall have the right to impose Liquidated Damage/Penalty at the rate of 0.5% of the contract value, per week of delay or part thereof subject to a maximum of 10% of the contract value. For this purpose, the period for which LD is applicable shall be worked out based on portion of time extension granted solely attributable to contractor at the end of the contract. Contract Value for this purpose, shall be the final executed value exclusive of ORC, Extra Works executed on Manday rate basis, Supplementary/ Additional Items and PVC.
25.2	In case of LD recovery, the applicable GST shall also be recovered from the contractor.
25.3	All other terms shall be as per the provision of GCC in this regard.
26.0	EXTENSION OF TIME FOR COMPLETION & CERTIFICATE TOWARDS COMPLETION
26.1	EXTENSION OF TIME FOR COMPLETION
26.1.1	If the completion of work as detailed in the scope of work gets delayed beyond the contract / completion period, the contractor shall request for an extension of the contract and BHEL at its discretion may extend the contract.
26.1.2	Based on the reviews jointly signed, the works balance at the end of original contract period less the backlog attributable to the contractor shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', the contractor is bound to complete the portion

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	of backlog attributable to the contractor. Any further 'Time extension' or 'Time extensions' at the end of the previous extension shall be worked out similarly.
26.1.3	However, if any 'Time extension' is granted to the contractor to facilitate continuation of work and completion of contract, due to backlog attributable to the contractor alone, then it shall be without prejudice to the rights of BHEL to impose penalty/ LD for the delays attributable to the contractor, in addition to any other actions BHEL may wish to take at the risk and cost of contractor.
26.1.4	A joint programme shall be drawn for the balance quantity of work to be completed during the period of 'Time Extension', along with matching resources to be deployed by the contractor as per specified format. Review of the programme and record of shortfall shall be done.
26.1.5	During the period of 'Time extension', contractor shall maintain their resources as per mutually agreed program.
26.1.6	At the end of total work completion as certified by BHEL engineer, and upon analysis of the total delay, the portion of time extensions attributable to (i) Contractor, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to 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 contractor and recoverable from the dues payable to the contractor.
26.2	CERTIFICATE TOWARDS COMPLETION
31.2.1	The work under the scope of the contractor shall be deemed to have been completed in all respects only when so certified by CM, BHEL / NTPC. The decision of BHEL in this regard shall be final and binding on the contractor.
27.0	GUARANTEE
27.1	Even though the work will be carried out under supervision of BHEL, the contractor will be responsible for the quality of workmanship, quality of materials/ items and design for which the contractor is responsible.
27.2	The contractor shall guarantee the work executed under the scope of the contract for a period of 12 (twelve) months from the date of start of guarantee period as certified by the engineer (ie on completion of total work under scope and taking over by BHEL) and shall rectify free of cost all defects due to faulty supply or work done. In the event of the Contractor failing to repair the defective works within the time specified by the Engineer, BHEL may proceed to undertake the repairs of such defective works by itself, without prejudice to any other rights and recover the cost incurred for the same along with 5% overheads from the Security Deposit.
28.0	MOBILISATION ADVANCE
	Not applicable for this tender.
29.0	OVER RUN CHARGES
	Applicable as per GCC
30.0	REVISION ON ACCEPTED CONTRACT RATE
	Not applicable for this tender.
31.0	PRICE VARIATION CLAUSE
	Not applicable for this tender.
32.0	EXTRA/ ADDITIONAL ITEMS OF WORK
	Shall be as per GCC.
33.0	SECURITY DEPOSIT, PERFORMANCE BOND & FINAL BILL
33.1	Security deposit shall be applicable as per relevant clause of GCC (Volume-IB).
	Return of security deposit shall be as per relevant clause of GCC (Volume-IB).
33.2	Performance bond is not applicable for the tender.
33.3	Final Bill
	Final bill shall be as per clause no. 2.23.2 of GCC (Vol-IB)
34.0	TAXES, DUTIES ETC

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34.1	All taxes excluding GST & BOCW Cess (as specified elsewhere in the tender) but including, Charges, Royalties, any State or Central Levy and other taxes for materials if any obtained for the work and for execution of the contract shall be borne by successful bidder and shall not be payable extra by BHEL. Any increase of above at any stage during execution of contract, including extension of the contract, shall have to be borne by successful bidder contractor. Bidder's quoted/ accepted rates/ price shall be inclusive of all such requirements.
34.2	GST along with Cess (as applicable) legally leviable & payable by successful bidder as per GST Law shall be paid by BHEL, extra. Hence, bidder shall not include GST along with Cess (as applicable) in their quoted rates/ price.
34.3	Successful bidder shall furnish proof of GST registration with GSTN Portal covering the services under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by successful bidder on BHEL for this project / work.
34.4	Since GST on output will be paid by BHEL separately as enumerated above, bidder's quoted rates / price should be after considering the Input Credit under GST law at bidder's end.
34.5	TDS under Income Tax Act shall be deducted as per prevailing IT rules from the bills.
34.6	TDS under GST shall be deducted as per prevailing GST rules from the bills.
34.7.1	You may collect TCS under section 206C (1H) of Income Tax Act, 1961 if applicable.
34.7.2	In case, you collect TCS under section 206C (1H) of Income Tax Act, 1961, following compliance is required.
34.7.2.1	TAN and PAN of vendor should appear in all invoices/claims. Copy of TAN /TCS registration is to be submitted.
34.7.2.2	Amount of TCS and Assessable value on which TCS has been calculated should be specified clearly in the invoice.
34.7.2.3	You shall be required to submit certificate of TCS in Form no. 27D within 15 days from the due date for furnishing the statement of tax collected at the source.
34.7.3	In case, you do not collect TCS under section 206C(1H) of Income Tax Act, 1961, following declaration is to be submitted alongwith each invoice: - "I/We hereby declare that I/We are not required to collect TCS under section 206C (1H) of Income Tax Act, 1961, on this bill.
34.7.4	In event of failure to comply with the provisions of the Act, or proper certificate not issued, or if tax collected but not remitted to the Government, or for any other reason and thereby causing loss to BHEL, the same shall be recoverable from the vendor with applicable interest.
34.7.5	You shall comply with all statutory amendment/notifications in this respect.
34.8	Bidder shall note that GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act & Rules referred thereunder) wherein the 'Bill To' details shall encompass following. BHEL GSTN – Refer attached GSTN code table of BHEL. Name - BHARAT HEAVY ELECTRICALS LIMITED Address - Shall be intimated later. Specific details of BHEL GSTN, Name and Address as stated above, have been specified elsewhere in the tender.
34.9	Successful bidder to intimate immediately on the day of removal of goods (in case of any supply of goods) to BHEL along with all relevant details and send a scanned copy of Tax Invoice to BHEL through following communication mode for enabling BHEL to meet its GST related compliances. Portal address. and Email address – Shall be intimated later. Specific details of above shall be intimated to successful bidder by BHEL at appropriate juncture.
34.10	In case of delay in submission of above-mentioned documents on the date of despatch, BHEL may incur penalty / interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from successful bidder, in case such delay is not attributable to BHEL.
34.11	In case of raising any Supplementary Tax Invoice (Debit / Credit Note), successful bidder shall issue the same containing all the details as referred to in Section 34 read with Section 31 of GST Act & Rules referred there under.

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34.12	Successful bidder shall comply with the Time Limit prescribed under the GST Law and rules thereof for raising of the Tax Invoice. If any supply of goods is applicable, successful bidder shall also ensure prompt delivery of goods after despatch.
34.13	Bidder shall note that in case GST credit is delayed / denied to BHEL due to delayed / non receipt of goods and / or Tax Invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons, not attributable to BHEL, GST amount shall be recoverable from successful bidder along with interest levied/ leviable on BHEL, as the case may be.
34.14	Successful bidder shall upload the invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act and the same shall be available to BHEL in FORM GSTR-2A/2B electronically through the common portal. Bidder shall note that in case of delay in declaring such invoice in your return and GST credit availed by BHEL is denied or reversed subsequently as per GST Law, GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from the successful bidder along with interest levied / leviable on BHEL
34.15	Way Bill: Successful bidder to arrange for way bill / e-waybill for any transfer of goods for the execution of the contract. Successful bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants & machinery at site for execution of the works under this contract, Road Permit / Way Bill, if required, shall be arranged by successful bidder and BHEL will not supply any Road Permit/ Way Bill for this purpose.
34.16	Any new taxes & duties, if imposed subsequent to due date of offer submission as per NIT & TCN, by statutory authority during contract period (including extension, if the same is not attributable to you), shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL. However, you shall obtain prior approval from BHEL before depositing new taxes and duties.
34.17	Benefits and / or abolition of all existing taxes must be passed on to BHEL against new taxes, if any, proposed to be introduced at a later date.
35.0	BOCW ACT & CESS ACT: REFER ANNEXURE-D BELOW

	Annexure –D Specific Clause w.r.t. BOCW Act & Cess Act 1.It shall be the sole responsibility of the contractor as employer to ensure compliance of all the statutory obligations under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder. 2.It shall be sole responsibility of the contractor engaging Building Workers in connection with the building or other construction works in the capacity of employer to apply and obtain registration certificate specifying the scope of work under the relevant provisions of the Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 from the appropriate Authorities. 3.It shall be responsibility of the contractor to furnish a copy of such Registration Certificate within a period of one month from the date of commencement of Work. 4.It is responsibility of the contractor to register under the Building and other Construction Workers' Welfare Cess Act, 1996 and deposit the required Cess for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 at such rate as the Central Government may, by notification in the Official Gazette, from time to time specify. However, before registering and deposit of Cess under the Building and other Construction Workers' Welfare Cess Act, 1996, the contractor will seek written prior approval from the Construction Manager. 5.In case where the contractor has been accorded written approval by the Construction Manager and the contractor is required to furnish information in Form I and deposit the Cess under the Building and other Construction Workers' Welfare Cess Act, 1996, fails to do so, BHEL reserves right to impose penalty at the rate of 30% of Cess Amount. 6.It shall be sole responsibility of the contractor as employer to get registered every Building Worker, who is between the age of 18 to 60 years of age and who has been
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	engaged in any building or other construction work for not less than ninety days during the preceding twelve months as Beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996. 7.It shall be sole responsibility of the contractor as employer to maintain all the registers, records, notices and submit returns under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder. 8.It shall be sole responsibility of the contractor as employer to provide notice of poisoning or occupation notifiable diseases, to report of accident and dangerous occurrences to the concerned authorities under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the rules made thereunder and to make payment of all statutory payments & compensation under the Employees' Compensation Act, 1923. 9.It shall be responsibility of the Contractor to furnish BHEL on monthly basis, Receipts/ Challans towards Deposit of the Cess under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder along with following statistics: (i) Number of Building Workers employed during preceding one month. (ii) Number of Building workers registered as Beneficiary during preceding one month. (iii) Disbursement of Wages made to the Building Workers for preceding wage month. (iv) Remittance of Contribution of Beneficiaries made during the preceding month 10.BHEL shall reimburse the contractor the Cess amount deposited for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder. However, BHEL shall not reimburse the Fee paid towards the registration of establishment, fees paid towards registration of Beneficiaries and Contribution of Beneficiaries remitted. 11.It shall be responsibility of the Building Worker engaged by the Contractor and registered as a beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 to contribute to the Fund at such rate per mensem as may be specified by the State government by notification in the Official Gazette. Where such beneficiary authorizes the contractor being his employer to deduct his contribution from his monthly wages and to remit the same, the contractor shall remit such contribution to the Building and other construction Workers' Welfare Board in such manner as may be directed by the Board, within the fifteen days from such deduction. 12.If any point of time during the contract period, non-compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder is observed, BHEL reserves the right to withhold a reasonable amount from the payables to discharge any obligations on behalf of Contractors. The reasonable amount shall be decided by the Construction Manager in consultation with Resident Accounts Officer & Head HR and shall be final. 13.The contractor shall declare to undertake any liability or claim arising out of employment of building workers and shall indemnify BHEL from all consequences / liabilities / penalties in case of non-compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.
36.0	TERMS OF PAYMENT
36.1	Progressive Payment against monthly running bills will be made of the of erected value on Pro-rata basis as per the billing break-up/Schedule under clause 39.5. The payment for running bills will be released after submission of running bill complete in all respects with all documents. It is the responsibility of the contractor to make his own arrangements for making timely payments towards labour wages, statutory payments, outstanding dues etc. and other dues in the meanwhile.

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	The contractor shall submit running bill, once in a month at the end of each month. The RA bill complete in all respect including required quality documents and HR statutory compliances, accompanied by BHEL engineers certified measurement sheets, jointly signed protocols, will be paid within 30 days of submission of bill, subject to completeness and correctness. Income Tax at the prevailing rates on gross value of work done & applicable surcharge shall be deducted from contractor's bill, unless exempted by Income Tax Authority. No interest shall be payable for the delayed payment (if any).
36.2	PAYING AUTHORITY: CONSTRUCTION MANAGER, BHEL SITE OFFICE, 3X660 MW NABINAGAR PROJECT, NPGCL, SHIVANPUR, P.O-ANKORHA, AURANGABAD, BIHAR, PIN- 824303
37.0	CONTRACT PRICE
37.1	The bidder shall quote their price strictly in accordance with prescribed price/rate schedule -Volume-III (SCH-1). The total price quoted in Price Schedule, Volume-III shall be considered for evaluation & awarding. Basis for price for the supply of services shall remain firm till completion of contract, basic price basis inclusive of all taxes & duties, levies etc., except Goods & Service Tax (GST).
38.0	IMPOSITION OF INTEREST ON DELAYED RECOVERY, IF ANY
38.1	Reconciliation of measurement shall be carried out at site on quarterly basis.
38.2	Above quarterly reconciled figures shall have Tolerance in accuracy as '+1.0% of the total value of actual work executed in that quarter' 'Value of actual Work' for this purpose shall be inclusive of PVC and ORC.
38.2(a)	For prepayment beyond tolerance limit, if any, recovery/adjustment shall be made from next payable.
38.3	Final reconciliation is to be done on yearly basis. For prepayment, if any, Recovery/adjustment need to be made from the vendor from their next payable.
38.4	In case, contractor requests to postpone any recovery, Interest on such delayed Recovery will be applicable @ SBI Base Rate plus 6% till the period of recovery. Suitable intimation to vendor is to be made in this regard.
39.0	OTHER TERMS
39.1	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.
39.2	Drawing showing enough details for the construction as per the specification shall be furnished to the contractor in a phased manner as far as possible.
39.3	The records / log-books / registers like Site Order Book, Hindrance Register, Cement / Steel Supply and Consumption Register, etc. are to be maintained properly by the vendor duly signed by BHEL representative.
39.4	All other term & conditions of this specification shall be governed by the pertinent provisions of SCC & GCC as applicable.
39.5	BILLING BREAK-UP /SCHEDULE
39.5.1	Successful bidder shall submit detailed billing schedule to BHEL for review & approval.
39.5.2	Progressive payment against monthly running bills will be made of the of erected value on Pro-rata basis as per following billing break-up, in conjunction with terms of payment provision of the tender, operated on approved billing schedule. –

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	Activity	Allocated percentage
	Completion of Placement in position/ Laying of cable / Cable tray as applicable.	45%
	Completion of Alignment / Cable Termination as applicable.	15%
	Completion of Grouting /Welding/Bolting/Fixing/ Cable dressing as applicable.	15%
	Commissioning of equipment, as per approved billing schedule, on submission of protocols, duly signed by BHEL site Engineer/ NTPC on pro-rata basis.	15%
	On completion of Trial Operation and Completion of Facilities for the main system and Auxiliary Systems of LHS & GHS.	5%
	On submission of all final documents as per Technical Specifications and successful completion of the Performance Guarantee (PG)/ Demonstration Test at site/ handing over of the complete system.	5%
	Total	100%
	BHEL-Site, at their discretion, may further split up above percentages and effect payment to suit the site condition, cash flow requirement and according to the progress of work. The billing break-up is drawn for progressive payment and shall not be construed as the value/ price of corresponding item, unless otherwise decided by BHEL.	