

**EPC OF DRY
BOTTOM ASH
HANDLING
SYSTEM AT
KODERMA 2X800
MW**

VOLUME- IA

TECHNICAL CONDITIONS OF CONTRACT (TCC)

DRY BOTTOM ASH HANDLING SYSTEM-
EPC PACKAGE (PACKAGE-I) OF UNIT#3
& UNIT#4 at 2x800 MW DVC Koderma
Ph-II, Jharkhand.

BHARAT HEAVY ELECTRICALS LIMITED



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CHAPTER-I : PROJECT INFORMATION

Sl. No.	Description	Details
1	Project Title	2X800MW KODERMA THERMAL POWER STATION (KTPS) PHASE-II
2	Customer	Damodar Valley Corporation (DVC)
3	Location	<p>The Koderma Thermal Power Station project is located near Banjhidi Village of Koderma District in Jharkhand. National Highway NH-19, which is referred to Delhi–Kolkata highway is about 25 Km from the Site. The nearest National Highway NH- 20 is about 8 Km from the site.</p> <p>The Site is located at latitudes of 24°23’00” N and longitudes of 85°33’15” E respectively.</p> <p>The Site can be approached from District Head Quarters through National Highway NH-20 and thereafter the internal road of the town. The nearest airport is Gaya Airport at Bodh Gaya at about 108 Km from the project site. The project is situated about 150 Km from Ranchi, the capital of Jharkhand.</p> <p>Town/City</p> <p>Nearest Town Koderma- About 7 Km</p> <p>District Head Quarters Koderma Collectorate -About 16 Km</p> <p>Nearest Major Town Hazaribagh- About 60 Km</p> <p>Nearest Major City Gaya About 115 Km</p>
4	Nearest Airport	<p>The nearest airport is Gaya Airport at Bodh Gaya at about 108 Km from the project site.</p> <p>Other Important Commercial Airport is Birsa Munda International Airport Ranchi at about 170 Km from the project site.</p>
5	Access by Road/Rail/Major Cities	National Highway NH-19, which is referred to Delhi-Kolkata highway is about 25 Km from the Site. The nearest National Highway NH- 20 is about 8 Km from the project.

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6	Temperature	Climatological data from nearest observatory shall as per Technical Specification of DVC, Section-VI Part-A
7	Seismic Zone	As per Technical Specification of DVC, Section-VI, Part-B, Sub-Section-D-1-12 (E), Civil Works Seismic Design Criteria.
8	Wind Speed	As per Technical Specification of DVC, Section-VI, Part-B, Sub-Section-D-1-12 (D), Civil Works Wind Design Criteria.
INSTRUCTIONS TO BIDDERS		
1.1	The Bidder shall visit project site and acquire full knowledge and information about conditions prevailing at site and in & around the plant premises, together with site conditions, transportation routes, various distances, all the statutory, obligatory, mandatory requirements of various authorities and all information that may be necessary for preparing the bid and entering into the Contract. All costs for and associated with site visits shall be borne by the bidder.	
1.2	Other contractors would be working in this area and their structures are to be protected. The material brought and stacked for construction should not make hindrance to other contractors.	
1.3	The Project information given herein is for general guidance and shall not be contractually binding on BHEL/Owner. All relevant site data /information as may be necessary shall have to be obtained /collected by the Bidder.	
1.4	The contractor, in the event of this work awarded to him, shall establish an office at site and keep posted an authorized, responsible officer with valid Power of Attorney for the purpose of the contract. Any order or instructions of the `Engineer' or his duly authorized representative, communicated to the contractor's representative at site office will be deemed to have been communicated to the contractor at his legal address.	
1.6	No claim will be entertained by BHEL on ground of lack of knowledge and the contractor's rates shall be deemed to have taken this into account.	
	Bidders may fix up their site visit in consultation with below mentioned contact person:	
	Name:	Shri Rikash Jyoti Dutta
	Designation:	DGM

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CHAPTER-I : PROJECT INFORMATION

Email:	rjd@bhel.in
Ph no:	9831073012
Name:	Shri Swarupmohan Chattopadhyay
Designation:	AGM
Email:	schattopadhyay@bhel.in
Ph no:	8585029264

Note: - The bidder is advised to visit and examine the site of WORKS and its surroundings and obtain for himself on his own responsibility all information that may be necessary for preparing the bid and entering into the CONTRACT. All costs for and associated with site visits shall be borne by the bidder.

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02.00.00	BROAD SCOPE:
02.01.00	Intent of Specification The complete scope of the package includes Design, Engineering, Manufacture, Supply, Construction, Structural works, Erection, Testing & Commissioning and Handing over works for the Dry Bottom Ash (DBA) Handling system (Bottom Ash and ECO Ash conveying) for Koderma TPS Phase-II (2X800 MW), shall be on the basis of single point responsibility, completely covering the activities and services in respect of all the equipment & works specified and covered under the tender specifications..
02.02.00	Successful bidder shall do the complete site survey immediately after received the LOA and physically measure the coordinate of DBA system utilities at site in presence of BHEL and DVC before starting the engineering to avoid/mismatch with the existing structure. After survey, Successful Bidder shall submit the revised/final layout to avoid the fouling/mismatch with existing structure/utilities during detail engineering without any extra cost and time implication with BHEL.
02.03.00	The engineering team of successful bidder shall be available for meeting with BHEL ISG, Bangalore Office, DVC HQ, Kolkata Office, BHEL other Unit like Trichy/ Ranipet/PEM and other units for interface issue and Koderma Site as and when required for discussion of engineering till completion of the project.
02.04.00	Before submitting the bid, the <u>Bidder should inspect and examine the project site and its surroundings</u> and should satisfy themselves as to the nature of the ground and subsoil, the quantities and nature of work, materials necessary for completion of the work and their availability, means of access to site and in general shall himself obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his offer. No consequent extra claims on any misunderstanding or otherwise shall be allowed by BHEL under any circumstances post award of the contract. Declaration in this regard shall be given as per format in Annexure-14 .
02.05.00	Bidder shall take all necessary precautions to protect all the existing equipment, structures, facilities and buildings etc. from the damage. In case any damage occurs due to the activities of

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	<p>the Bidder on account of negligence, ignorance, accidental or any other reason whatsoever, the damage shall be immediately rectified by the Bidder at his own cost to the satisfaction of DVC/BHEL. The Bidder shall also take all necessary safety measures during erection/commissioning activities, at his own cost, to avoid any harm or injury to his/other's workers and staff from the equipment and facilities of the power plant.</p>
02.06.00	<p>Construction of open storage yard and closed storage shed for the storage of materials shall be in the bidder's scope. Bidder shall also consider fencing/illumination of open storage and site fabrication area as and when allocated at site. Receipt, unloading, storage (open & closed), preservation, handling and conservation of equipment at site is in bidder scope as per tender Specification.</p>
02.07.00	<p>Items though not specifically mentioned in structural, Mechanical, Electrical and C&I scope matrix enclosed annexures etc. in this specification or DVC technical specification but needed to complete the equipment/systems to meet the intent of specification, shall also be deemed to be included in Bidder's scope of supply & works. unless otherwise specifically mentioned in exclusions. So, the Bidder should carefully study all the NIT documents and understand the complete scope of work as per NIT documents while submitting the offer. Items which are specifically excluded in the specification shall only be supplied by BHEL.</p>
02.08.00	<p>The responsibility of bidders includes technical coordination (including participation in Technical co-ordination, Project/Contract review meetings with DVC/BHEL), finalization of drawings/documents, submission of engineering drawings/ documents ,3D modelling drawings and processing of their approvals by DVC/BHEL. Bidder shall be solely responsible for submission & approval of drawings, composite layouts, flow diagrams, Technical data sheets, QAP, Field Quality Plans, Erection manual, Commissioning procedures, O&M manuals, as built drawings after E&C of all equipment, PG test procedures, Inspection & Testing Procedures from DVC/BHEL in time and shall plan the activities accordingly.</p>
02.09.00	<p>3D MODELLING SYSTEM</p> <p>All the facilities pertaining to complete Dry Ash handling plant shall be made in computerized 3D modelling system as detailed in DVC specification. For details, Bidder to refer Annexure-12 regarding submission and requirement of 3D drawings for this package.</p>

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02.10.00	PAINTS The Bidder's scope of work includes supply of paints and painting of all equipment/items and structures including BHEL supplied items as per stipulated requirements in the specification and DVC's standard color-coding scheme.
02.11.00	PRE-COMMISSIONING AND COMMISSIONING ACTIVITIES The Bidder's scope shall include all pre-commissioning and commissioning activities, materials and services as detailed in the other portion of DVC NIT specifications (Erection Condition of Contract) including supply of all consumables, temporary equipment & piping (if any), instruments for commissioning as required including skilled manpower for the scope of the package.
02.12.00	GUARANTEE TESTS The guarantee tests for various equipment and systems shall be carried out as specified under chapter of Functional Guarantees. All special equipment, tools and tackles, instruments, measuring devices required for the successful conductance of Guarantee Tests shall be provided by the Bidder, free of cost. All costs associated with the tests shall be included in bid price. All statutory clearances necessary for guarantee tests shall be obtained by the bidder from respective authorities without any additional cost to BHEL.
02.13.00	SPARES The scope of supply by the Bidder includes mandatory spares as per the provided list, start-up and commissioning spares, consumable spares, and any other spares required for the erection, testing, commissioning, COD, start-up, initial operation and performance guarantee (PG) test of the Dry Bottom Ash Handling System.
02.14.00	SPECIAL TOOLS & TACKLES AND TEST/MEASURING EQUIPMENT One set of all special tools and tackles including testing, calibrating and measuring instruments required for erection, assembly, disassembly and maintenance & testing of all equipment/systems for the package shall be supplied by the Bidder. The Bidder shall not use these special tools, tackles and testing/measuring equipment for erection/commissioning purposes and shall be new and in an unused condition, when they are handed over to the Employer.

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02.15.00	<p><u>GENERAL NOTES TO BIDDERS:</u></p> <ol style="list-style-type: none">1. BHEL reserves the right to request for any additional information and also reserves the right to reject the proposal of any bidder, if in the opinion of BHEL, qualification data is incomplete or the bidder is found not qualified to satisfactorily perform the works.2. Notwithstanding anything stated above, BHEL reserves the right to assess bidder's capability and capacity to perform, should the circumstances warrant such assessment in the overall interest of the Project.3. The bid shall be complete in all respects and shall necessarily contain but not limited to Technical description, Technical data sheets of equipment and systems, Schematic diagrams, System Process & Instrumentation Diagrams (P&ID), Guarantee declaration schedules. Spares shall meet the project scope and technical specification requirement.4. The bid shall also include Price schedules, Bidder's Qualifications, Eligibility and Conformity of the facilities, list of special Tools & Tackles. Sub-vendors proposed by the bidder shall also be included in the bid submitted by bidder.5. Bidder shall provide details of important conditions, local representatives, Erection Tools & Plants, Bought Out Items, Quality Assurance programme, Project Schedule, Milestone Schedule, Any other Additional Information.6. BHEL reserves the right to demand/seek any additional information and clarification from the Bidder after submission of his bid for examination and evaluation of bid. Bidder shall furnish the same without any pre-conditions.7. Bidder shall understand limitations/ constraints for deciding the final layout for ash handling system which shall be subjected to approval of DVC/BHEL.8. Bidders shall submit the offer strictly in line with the technical specifications and instructions provided in this document. In case the requirements mentioned in these
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	<p>documents are not complied with, the offers may be considered as incomplete and would become liable for rejection.</p> <p>9. Bidder to note that bidder’s credentials will be examined as per the conditions specified in the NIT specification and same shall be submitted to DVC for approval. Placement of PO on successful bidder is subjected to the vendor approval received from DVC. Sub vendors/ Makes of all the items, equipment/components are also subjected to DVC/ BHEL approval.</p> <p>10. All Bidders to submit their credentials and formats attached in Technical requirements and 3K attachments along with offer in 3 sets for submission to DVC for vendor approval. If DVC/ BHEL does not approve any vendor the price bid of the vendor will not be opened. Further, on obtaining the order, the Successful Vendor shall submit his reputed sub vendor list, reputed makes/data sheets of all equipment/components & documents as desired by DVC for approval. If any of the sub vendor including his own make, does not have the approval of DVC/ BHEL, the same may be replaced with another DVC approved sub Vendor without any price implications to BHEL. It is the complete responsibility of the bidder to obtain “sub vendor approval” from DVC for all equipment & components being supplied. Any delay in sub vendor’s approval should not affect the project schedule. All sub-vendor approvals should be obtained within two weeks from the date of LOA.</p> <p>11. The DVC Technical specification, General Technical Specifications/ Requirements, Amendments given with this specification (Annexure-6 &7), which shall be read with this technical specification and shall form part of the tender.</p>
02.16.00	<p>TECHNICAL SPECIFICATION -BROAD SCOPE OF WORK</p> <p>BIDDER to refer Annexure-09 for BROAD SCOPE MATRIX for scope of work.</p>
02.17.00	<p>TECHNICAL SPECIFICATION -ELECTRICAL & C&I SCOPE OF WORK</p> <p>Complete Electrical and C&I System for Dry Bottom Ash Handling System Package is in the scope of bidder. Refer Annexure-10 for detailed scope of Electrical & C&I Scope of bidder.</p>

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02.18.00	<p>Tool and Plants: All the T&Ps required for the execution of the package till handing over of the Unit to end customer shall be in the scope of Bidder.</p> <p>BHEL shall not provide any T&Ps for this scope of work. All T&Ps required for handling of items / materials and complete execution of work is to be arranged by the Contractor. However, if in any unforeseen circumstances, requirement of any T&Ps (available with BHEL at site) arises, on request of bidder the same may be provided on chargeable basis but BHEL reserves the right of provision of such T&Ps. Charges shall be applied as per BHEL norms and guidelines and direction of engineer in-charge.</p>
02.19.00	<p>Supply and E&C of any other associated equipment/items/Structures/Buildings not specifically mentioned here in this specification but required for successful operation, completion, installation, and operation of the AHP shall be deemed to be have been included in bidder's scope of work and bidder to quote accordingly.</p>
02.20.00	<p>Notwithstanding the details furnished in this document, it shall be the responsibility of the Contractor to complete the work in all respects, commission and complete integrated trial operation of system & performance tests of AHP to the satisfaction of end user/BHEL.</p>
02.21.00	<p>NO TECHNICAL OR COMMERCIAL DEVIATIONS ARE ALLOWED IN THIS TENDER.</p>
02.22.00	<p>OTHER SPECIFIC CONDITION</p>
02.23.00	<p>INSURANCE: -</p> <p>Contractor shall at its own expense take out insurance as specified in Clause 34 of DVC NIT specifications Section IV : General Conditions of Contract GCC.</p> <p>To the extent specified in Appendix 3 (Insurance Requirements) to the Contract Agreement, the Contractor shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Contract, the insurances set forth below in the sums and with the deductibles and other conditions specified in the said Appendix. The identity of the insurers and the form of the policies shall be subject to the approval of the Owner (DVC) and BHEL, who should not unreasonably withhold such approval.</p>

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Owner (DVC) and BHEL shall be as co-insured under all insurance policies taken out by the Contractor pursuant to DVC NIT specifications Section IV : General Conditions of Contract GCC 34.1, except for Third Party Liability, Workman's Compensation and Employer's Liability Insurances and the Contractor's Sub-Contractors shall be named as co-insured under all insurances policies taken out by the Contractor pursuant to DVC NIT specifications Section IV : General Conditions of Contract GCC 34.1, except for the Cargo Insurance during Transport, Workman's Compensation and Employer's Liability Insurances. All insurers rights of subrogation against such co-insureds for losses or claims arising out of the performance of the Contract shall be waived under such policies

(a) Cargo Insurance During Transport Covering loss or damage occurring while in transit from the Contractor's or Subcontractor's works or stores until arrival at the Site, to the Plant and Equipment (including spare parts therefor) and to the Contractor's Equipment.

(b) Installation All Risks Insurance Covering physical loss or damage to the Facilities at the Site, occurring prior to Completion of the Facilities, with extended maintenance coverage for the Contractor's liability in respect of any loss or damage occurring during the Defect Liability Period while the Contractor is on the Site for the purpose of performing its obligations during the Defect Liability Period.

(c) Third Party Liability Insurance Covering bodily injury or death suffered by third parties (including the Employer's personnel) and loss of or damage to property occurring in connection with the supply and installation of the Facilities.

(d) Automobile Liability Insurance Covering use of all vehicles used by the Contractor or its Subcontractors (whether or not owned by them) in connection with the execution of the Contract.

(e) Workers' Compensation In accordance with the statutory requirements applicable in any country where the Contract or any part thereof is executed.

(f) Employer's Liability In accordance with the statutory requirements applicable in any country where the Contract or any part thereof is executed. (g) Other Insurances Such other insurances as may be specifically agreed upon by the parties hereto as listed in the said **Appendix 3**.

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g) It is the entire responsibility of the successful bidder to insure their workmen against accident and injury while at work as required by the relevant rules and to pay compensation, if any, to their workmen as per statutory act. The successful bidder shall also insure their staff against accident/ injury with Workmen's compensation policy, group personal insurance, etc., as may be applicable. Lodging and settlement of the claim shall be the responsibility of the successful bidder.

h) The successful bidder shall take insurance covering for all materials (excluding plant material), tools & plants, manpower, workers, etc., required to be provided & deployed for the job by the bidder.

i) These insurance covers have to be taken prior to start of work and they shall make available the policy 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 the successful bidder. Regarding aforesaid insurance cover, the successful bidder shall directly deal with the insurance company for all matters regarding the insurance in his scope.

j) Successful bidder shall timely intimate dispatches/ discrepancy during contract operation, to the underwriter. The name of the underwriter and Policy No shall be intimated in due course of time.

k) Insurance as applicable for field work such as third-party liability, workmen compensation, Seller/Contractor's own Tools & Plants and automobile shall be arranged by the Seller/ Contractor (and cost of such insurance shall be included in the quoted price), which shall include but not limited to the following:

1) Workmen's Compensation Insurance

This insurance shall protect the Contractor against all claims applicable under the Workmen's Compensation Act, 1948 (Government of India). This policy shall also cover the Contractor against claims for injury, disability disease or death of his or his Sub-Contractor's employees, which for

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	<p>any reason are not covered under the Workmen's Compensation Act, 1948. The liabilities shall not be less than the following:</p> <p>Workmen's Compensation : As per Statutory Provisions</p> <p>Employee's Liability : As per Statutory Provisions</p> <p>2) Comprehensive Automobile Insurance</p> <p>This insurance shall be in such a form to protect the Contractor against all claims for injuries, disability, disease and death to members of public including the Employer's men and damage to the property of other arising from the use of motor vehicles during on or off the Site operations, irrespective of the Ownership of such vehicles. The liability covered shall be as herein indicated:</p> <p>Fatal Injury : Rs.100,000 each person</p> <p style="padding-left: 100px;">: Rs.200,000 each occurrence</p> <p>Property Damage : Rs.100, 000 each occurrence</p> <p>3) Comprehensive General Liability Insurance</p> <p>The insurance shall protect the Contractor against all claims arising from injuries, disabilities, disease or death of members of public or damage to property of others, due to any act or omission on the part of the Contractor, his agents, his employees, his representatives and Sub-Contractors or from riots, strikes and civil commotion.</p> <p>The hazards to be covered will pertain to all the Works and areas where the Contractor, his Sub-Contractors, his agents and his employees have to perform work pursuant to the Contract.</p> <p>The above is only illustrative list of insurance covers normally required and it will be the responsibility of the Contractor to maintain all necessary insurance coverage to the extent both in time and amount to take care of all his liabilities either direct or indirect, in pursuance of the Contract.</p>
02.24.00	<p>As part of the overall project management activity, the successful bidder shall be responsible for proper co-ordination of erection activities during various phases of execution of the contract. The successful bidder shall identify a person designated as construction manager, with whom</p>

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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 successful bidder. BHEL shall interact with the construction manager only on all matters on co-ordination between BHEL and the successful bidder.

The successful bidder shall confine all 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 successful bidder under conditions which might adversely affect quality & efficiency thereof, unless special precautions or measures are taken by the successful bidder 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 successful bidder of their responsibility to perform the works as per the schedule.

The successful bidder shall supply all skilled workmen like welders, gas cutters, electricians, riggers, sarangs, erectors, fitters, instrument machines 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 contemplated under this specification. Only fully trained and competent manpower 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 by the successful bidder. BHEL reserves the right to insist on removal of any employee of the successful bidder at any time, if they find him unsuitable and the successful bidder shall forthwith remove him.

The supervisory staff employed by the 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 the 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 agencies' of BHEL and BHEL's client/ consultant.

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	<p>The 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.</p> <p>The work shall be executed under the usual conditions affecting major power plant construction and in conjunction with numerous other operations at site. The successful bidder and his personnel shall co-operate with other personnel, and other successful bidders, coordinating his work with others and proceed in a manner that shall not delay or hinder the progress of work as a whole.</p> <p>The successful bidder's supervisory staff shall execute the work in the most substantial & workman like manner within stipulated time. Accuracy of work and aesthetic finish are essential part of this contract. The successful bidder shall be responsible to ensure that assembly & workmanship conform to the dimensions & tolerance given in the drawing/ instruction given by BHEL engineer from time to time.</p> <p>It is the responsibility of the successful bidder to engage his workman in shifts or on overtime basis for achieving the target set by BHEL during erection, commissioning and testing period. Bidder's quoted rate shall include all these contingencies.</p> <p>For rendering commissioning assistance during running of the unit till handing over of the set, dedicated team along with an exclusive supervisor need to be deployed by the successful bidder to attend the incidental works of commissioning as per the instruction of BHEL commissioning engineer. They shall be equipped with all necessary hand-tools to attend all the incidental works during commissioning.</p>
02.25.00	<p>Watch & Ward</p> <p>The contractor shall be responsible for Security of all equipment in his custody issued by BHEL/brought by him against pilferage, damage, etc. The contractor shall also be custodian of the items installed, operated and maintained by him, till handing over.</p>
02.26.00	<p>Inspection Agency</p>

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	<p>Inspection shall be carried out by end customer/ end customer's consultant/ BHEL/ Third Party Inspection Agency based on the inspection schedule/ category as per approved QAP/ categorization plan/ document.</p> <p>Seller / contractor shall give inspection call in line with approved QAP/Customer/Owner Hold Points to BHEL/Third Party Inspection Agency (as informed by BHEL) for arranging Customer / Owner / Consultant / Third Party participation (wherever applicable), with an advance notice of 15 working days (for indigenous items) and 30 working days (for imported items) for participation in inspection/ Joint inspection on the proposed date.</p> <p>During the inspection, if the equipment's are found to be not ready for inspection, all expenses incurred by BHEL /End customer /Consultant / Inspection Agency, on such planned visit will be recovered from seller / contractor. Therefore, seller to ensure readiness of equipment in all respect before the inspection.</p> <p>No item / equipment's shall be dispatched without obtaining Material Dispatch clearance certificate from BHEL irrespective of inspection categories.</p> <p>Inspection calls are to be raised by the seller/ contractor through BHEL Inspection portal https://cqir.bhel.in/ or any other portal/ method as instructed by BHEL from time to time.</p>
02.27.00	<p>Inspection and Testing</p> <ol style="list-style-type: none">1. Bidder shall give 15 days' advance written notice of equipment being ready for testing. The customer / Inspector, unless the witnessing of the tests is virtually waived, will attend such tests within 15 days of the date on which the equipment is notified as being ready.2. Type & routine test report / certificates shall include details of standard to which the tests are performed, test parameters, acceptance criteria, test set up etc. used during the testing along with the test piece details / rating and the detailed test record and final test result.3. All inspection, measuring and test equipment used by the contractor shall be calibrated periodically. Bidder shall maintain all relevant records of periodic calibration, instrument identification, and shall provide for inspection by bidder wherever asked specifically; bidder shall calibrate measuring / testing equipment in the presence of employer.

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	<ol style="list-style-type: none"><li data-bbox="337 262 1437 436">4. The details of the checks to be carried out for various components (MQP) are to be submitted within one month from the date of Purchase order by bidder for customer approval. Bidder shall refer QA part of DVC NIT specification while preparing MQP of various AHP equipment.<li data-bbox="337 451 1437 577">5. Bidder's representative has to be present during joint inspection by BHEL/BHEL's TPI/Customer/Customer's consultant of their Bought-out items at their sub-vendor's works irrespective of approved QAP<li data-bbox="337 592 1437 772">6. Bidder to ensure correctness of all the bidder's supplied items (Cat-III items as per approved inspection category document) in every aspect meeting approved drawings/datasheets/specification. Based on COC provided by bidder in BHEL format, BHEL will arrange MDCC from DVC.
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02.28.00 **NOTE:**

1. The end user's specification, General specifications/Requirements, Amendments, Clarifications, Pre-bid & Post-bid queries and BHEL-HSE manual are part of this specification and shall be read with this technical specification. Bidder shall submit a signed copy of this Tender Enquiry Specification along with all enclosures as Technical Offer with the Bid without any Deviation.
2. For the items manufactured by BHEL or for which BHEL Make is approved by customer as indicated in the end user's specification, bidder shall take quotation from BHEL and if the rates quoted by BHEL for the items is less, the items shall be procured from BHEL keeping in view the market viability of the product.
3. Bidder shall provide the Illumination, Earthing, Lightning protection for all areas where Civil OR Structural is in bidder scope.
4. Bidder to note that completion of engineering within the L1 schedule is a major milestone, so bidder shall put all endeavor to complete the same without linking to dispatch. As dispatches shall be sequential and it may so happen that actual requirement to site as per supply period, mentioned in L1 schedule is staggered/beyond the engineering completion schedule. In such event successful bidder shall not delay the ordering of BOI/ SMI on the pretext /issues of deferred supply period, shelf life of item, warranty issue etc. All care to be taken by the bidder in this regard during offer preparation. Similarly, during contract execution successful bidder will ensure the same while ordering BOI to their sub-vendor such that there is no hindrance in drawing submission & engineering.
5. Complete Detailed Engineering Drawings, Calculations, Selection of Components etc. shall be reviewed and approved by Plant Owner during Detail Engineering. All such Detailed Engineering Drawings, Calculations, Selection of Components shall be documented/stored/archived at BHEL.
6. Bidder to comply with the BATTERIES (MANAGEMENT & HANDLING) RULES-2001, BATTERIES (MANAGEMENT AND HANDLING) AMENDMENT RULES-2010 and E- WASTE (MANAGEMENT) AMENDMENT RULES, 2018 enclosed as ANNEXURE-23.

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	<p>7. Training of end user's personnel at equipment manufacturer's factory premises and O&M training at site, as per equipment manufacturer's standard training modules as per BHEL NIT & Technical conditions of contract, amendments & agreements till placement of order is also in the scope of bidder.</p> <p>8. During detail engineering, successful bidder has to submit all the drawings/documents and any other documentation through Document Management System (DMS) like Wrench portal, etc. Bidder would be provided access to the DMS for drawing. /doc. approval and adequate training manuals will be available to bidder; which bidder has to get conversant with. Necessary IT related information will have to be collected by successful bidder after award of contract, by coordinating with BHEL-IT team. All the documentation flow should happen in this document management system only.</p> <p>9. Any national and international codes and/or standards used in the design of the plant and equipment shall be shown by the Contractor to the Employer as and when required during contract period. Cost of same shall be deemed included in the total cost quoted by the bidder.</p> <p>10. BHEL shall not provide any T&Ps for this scope of work. All T&Ps required for handling of items / materials and complete execution of work is to be arranged by the Contractor.</p> <p>11. However, if in any unforeseen circumstances, requirement of any T&Ps (available with BHEL at site) arises, on request of bidder the same may be provided on chargeable basis but BHEL reserves the right of provision of such T&Ps. Charges shall be applied as per BHEL norms and guidelines and direction of engineer in-charge.</p>
02.29.00	<p>Smart Project Management System (SPMS)</p> <p>BHEL shall deploy Smart Project Management System (SPMS). The successful bidder shall engage with BHEL and provide required support for implementation of the same.</p> <p>Detailed instructions for the same shall be provided by BHEL during execution of the order/ contract. The bidder shall comply with the same.</p> <p>The seller/ contractor shall depute experienced manpower conversant with the system usage of</p>

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	SPMS for proper implementation.
02.30.00	<p>Dispatch Markings</p> <p>Each package/ Drum delivered under the Contract shall be marked by Supplier as per details listed below and such marking must be distinct and in English language.</p> <ol style="list-style-type: none">1) Name and address of the consignee (to be intimated at the time of dispatch clearance)2) Dispatched by: (Vendor name)3) LR No. Package No./ Total Package No eg: 1 of N, 2 of N; where N=Total no of packages in a particular consignment.4) Type of Supply: "Main equipment supply"/"Commissioning Spares" as the case may be. Besides above necessary, packing shall bear a special marking "TOP", "BOTTOM", "DO NOT TURN OVER", "KEEP DRY", "HANDLE WITH CARE", etc.4) Compliance to Material Tracking System and Consignment Tracking System as per the SPMS guidelines. <p>No item / equipment shall be dispatched without obtaining Material Dispatch clearance certificate from from BHEL irrespective of inspection categories.</p> <p>The Contractor shall ensure that all the plant and equipment are suitably packed and protected to prevent damage or deterioration during its transportation to site, handling and storage at site till the time of its installation. The ownership of all such packing material shall stand transferred to the Purchaser/ Employer upon dispatch of the plant and equipment.</p>
02.31.00	<p>E-way bill</p> <p>E-Way bill is to be generated by the bidder/ bidder's sub-vendor for transport of materials to the Project site, same shall be arranged by the bidder.</p> <p>The Seller/ Contractor shall be responsible for the issuance of e-way bill and other compliances relating to e-way bill as per GST law.</p>
02.32.00	Intellectual Property & Licenses

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	<p>The copyright in all drawings, documents and other materials containing data and information furnished by the Contractor herein shall remain vested in the Contractor or, if they are furnished to the BHEL/Owner directly or through the Contractor by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party. The BHEL/Owner shall however be free to reproduce all drawings, documents and other material furnished to the Purchaser/ Employer for the purpose of the contract including, if required, for operation and maintenance of the Facilities.</p> <p>All intellectual property rights that arise due to the execution of the delivery by the Seller and by its employees or third parties involved by the Seller for the performance of the contract shall be promptly notified by the Seller to the BHEL and shall be deemed to belong to the BHEL. The Seller shall be obligated to cooperate with the Buyer and do everything necessary to obtain or perfect the above-mentioned rights in favour of the BHEL.</p> <p>The Seller/contractor represents and guarantees that the delivery does not infringe on any of the intellectual property rights of third parties. In the event a third party makes a claim, the Seller shall also be obligated to do everything necessary to obtain or establish the alternate acceptable arrangement pending resolution of any (alleged) claims by third parties.</p> <p>The Seller/contractor agrees to indemnify, defend and hold harmless the BHEL/Owner, its officers, employees, agents, representatives, successors, assignees or any of the Buyer's customers buying or using the goods or services specified herein, against any actual or alleged infringement of such intellectual property interests, claims by third parties in this regard and shall pay to the Buyer merely on demand without demur and without requiring the Buyer to furnish any proof of such claim, such sum as indicated in the demand towards any liabilities, damages, penalties, injuries, claims, demands, actions, cost and expenses etc. suffered as a result thereof.</p> <p>The Seller/contractor agrees that its liability under this clause shall be unlimited.</p>
02.33.00	<p>Limitation of Liability</p> <p>Except in cases of criminal negligence or willful misconduct, the aggregate liability of the Seller/ Contractor to the purchaser, whether under the Contract, in tort or otherwise, shall not exceed</p>

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	the total Contract Price, provided that this limitation shall not apply to any obligation of the Contractor to indemnify the Employer with respect to patent infringement.
02.34.00	<p>Disposal of Surplus Material</p> <p>"Ownership of any Plant and Equipment in excess of the requirements for the Facilities (i.e. surplus material) shall revert to the Contractor upon Completion of the Facilities and Guarantee Test or at such earlier time when the Owner/End-User/End user's consultant/BHEL and the Contractor agree that the Plant and Equipment in question are no longer required for the Facilities, provided quantity of any Plant and Equipment specifically stipulated in the Contract shall be the property of the Owner whether or not incorporated in the Facilities. The Contractor shall remove from the site such surplus material brought by him in pursuance of the Contract, subject to the Contractor producing the necessary clearance from the relevant authorities (Customs, GST etc.), if required by law, in respect of re-export or disposal of the surplus material locally. The liability for the payment of the applicable taxes/duties, if any, on the surplus material so re-exported and/or disposed locally shall be that of the Contractor.</p> <p>The Contractor shall also indemnify to keep the Owner/End-User/BHEL harmless from any act of omission or negligence on the part of the Contractor in following the statutory requirements with regard to removal/disposal of surplus material. The Indemnity-cum-Undertaking Agreement shall be furnished by contractor as per proforma enclosed in End-User's Tender NIT Section-VII (Part 3 of 3 - Forms and Procedures). Further, in case the laws require the Employer to take prior permission of the relevant Authorities before handing over the surplus material to the Contractor, the same shall be obtained by the Contractor on behalf of the OWNER/BHEL.</p>
02.35.00	<p>Others</p> <p>a) Bidders are requested to carefully examine and understand the specifications, scope of work etc. and seek clarifications, if required, to ensure that they have understood the specifications, scope of work. Bidder's offer should not carry any sections like clarifications, interpretations and/ or assumptions.</p> <p>b) All the Tender Documents, addenda, corrigenda, BHEL clarifications etc. shall automatically become a part of the Order/ Contract after its finalization.</p>

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<p>c) Orders/ Guidelines/ Circulars issued by various ministries/ authorities of Govt. of India as issued from time to time shall be applicable for this tender/ contract (even if issued before or after the bid submission end date) for provisions/ restrictions as given from time to time. This shall include but not limited to the provisions/ restrictions for E-invoicing, Preference to Make in India, Restrictions on Procurement from a country which shares a land border with India, MSME Guidelines and Government e-Marketplace and any other provision/ restriction.</p>

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CHAPTER-III : SCOPE OF SUPPLY AND SERVICES

03.00.00	SCOPE OF SUPPLY AND SERVICES
03.01.00	<p>The scope of supply & services includes System Design, Engineering, Sizing & Selection of Equipment, Basic, Detail Engineering, 3D modelling, Manufacturing, Procurement, Supply of Mechanical, Electrical, C&I Equipment / items, Technological structures, Other structures, Inspection & Testing, Shop floor testing, Shop floor painting, Supply of equipment, Start-up, Commissioning & Mandatory spares, Packing & Forwarding, Transportation to the site including customs clearance/ port clearance, Receipt at Site, Unloading, Storage, Preservation, Security, Intra Site Transport & Handling at site, Statutory clearances, Erection & Commissioning, structural work, Electrical and C&I work, Supply of paint and Painting at site, System integration, Trial Run, Operation and maintenance, Training, Performance Guarantee Test, Auxiliary Power consumption demonstration and Handing Over of complete Dry Bottom Ash Handling System as EPC turnkey package of 2 X 800 MW Koderma Thermal Power Station Phase- II to DVC/BHEL.</p> <p>Bidder's responsibility shall include technical coordination (including participation in Project/Contract review meetings with DVC/DVC's Consultant/BHEL), finalization of drawings/ documents, submission of engineering & civil assignment drawings (Including load data)/ documents ,3D modelling drawings and processing of their approvals by DVC/DVC's Consultant/BHEL. Bidder shall be solely responsible for submission & approval of drawings, composite layouts, flow diagrams, Technical data sheets, QAP, Field Quality Plans, Erection manual, Commissioning procedures, O&M manuals, as built drawings after E&C of all equipment, PG test procedures, Inspection & Testing Procedures from DVC/DVC's Consultant/BHEL in time and shall plan the activities accordingly. Operation Philosophy and control write-up for complete Dry bottom ash system is in the scope of Bidder and shall be submitted along with submission of ash flow diagram for review and approval.</p> <p>Any additional items required for the completeness and satisfactory performance of the complete Dry Bottom Ash Handling system though not explicitly mentioned in enclosed annexures for structural, Mechanical, Electrical and C&I scope matrix etc in this specification or</p>

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	DVC technical specification shall also be in Bidder's scope of supply & works. Items which are specifically excluded in the specification shall only be supplied by BHEL.												
03.02.00	<p>BROAD SYSTEM DESCRIPTION</p> <p>Bidder to refer DVC tender specification and clarifications/corrigendum/Amendment for details. However, Bidder to follow the scope matrix as attached Annexure-9 & 10.</p> <p>The Dry bottom ash system shall be capable to handle the ash produced under all operating conditions, including a continuous operation with worst coal (worst coal being defined here the coal leading to the highest bottom and/or fly ash amounts) at BMCR condition. This shall include any peaks due to the removal of slag from the boiler tubes. The system shall be fully automatic with facilities for remote and local manual intervention by the operator.</p> <p>If any additional item / services are required to make the system complete as per BHEL/DVC NIT specifications/ amendments, the same may be included by the bidder in the BOQ along with the technical bid.</p> <p>The ash particle output size from the secondary crusher below BA intermediate silo shall be (-) 25 mm.</p> <p>Bidder shall ensure that ash particles of max (-) 25mm only shall be fed to the downstream system like BA Belt conveyors, trucks etc. Further, bidder shall demonstrate the final output size of (-) 25 mm as part of performance guarantee parameter considering handling of clinker upto 1000 mm size.</p>												
03.02.01	<p>Please Refer DVC NIT specifications for ash handling system.</p> <p>1) <u>ASH COLLECTION DATA AT BMCR</u></p> <p style="padding-left: 40px;">Following percentages of Ash collection is to be considered for dry bottom ash system sizing:</p> <p style="padding-left: 40px;">i. Fuel and Ash Quantities (per boiler):</p> <table border="1" style="margin-left: 80px; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;"></th> <th style="width: 45%;">Worst Coal</th> </tr> </thead> <tbody> <tr> <td>Coal fired at 100% BMCR</td> <td>t/h</td> <td>622</td> </tr> <tr> <td>Ash in coal</td> <td>%</td> <td>46</td> </tr> <tr> <td>Ash generated</td> <td>t/h</td> <td>286.2</td> </tr> </tbody> </table>			Worst Coal	Coal fired at 100% BMCR	t/h	622	Ash in coal	%	46	Ash generated	t/h	286.2
		Worst Coal											
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ii. **Ash distribution data -t/h (BMCR) Per Boiler @**

Furnace Bottom Hoppers	25 %	71.6
Economizer Hoppers	5 %	14.4

iii. **Additional Information**

Description	Temp. °C	Pressure mmWc	No. of Hoppers
Furnace Bottom Hoppers	1100	-40	1
Economizer Hoppers	360	-80	4

iv. **Guaranteed Conditions:**

Guaranteed Loads		100% TMCR Design Coal	55% TMCR Design Coal	100% TMCR Worst Coal	100% BMCR Design Coal	100% BMCR Worst Coal
Coal fired	t/h	466	268	572	504	622
Ash in coal	%	40	40	46	40	46
Ash generated	t/h	186.4	107.2	263.2	201.6	286.2

v. **Bottom Ash Data – Predicted:**

Guaranteed Loads		100% TMCR Design Coal	55% TMCR Design Coal	100% TMCR Worst Coal	100% BMCR Design Coal	100% BMCR Worst Coal
Ash collection	t/h	37.3	21.5	52.7	50.4	71.6
Ash temperature	°C	1040	1040	1040	1100	1100
Bottom ash temperature	°C	300	300	300	150	150
Total combustion air	t/h	2701	1552	2801	2926	3048
Cooling Air requirement	t/h	54	31	56	58	60.96

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vi. ECO Ash Data-Predicted:						
Guaranteed Loads		100% TMCR Design Coal	55% TMCR Design Coal	100% TMCR Worst Coal	100% BMCR Design Coal	100% BMCR Worst Coal
ECO Ash collection (Max.)	t/h	14.4				
Eco Ash temperature	°C	346	303	352	360	360
Eco ash temperature at the discharge end of 2nd Eco ash conveyor	°C	Bidder to furnish the temperature of Eco ash leaving the 2nd Eco ash conveyor in their offer				
Total combustion air	t/h	2701	1552	2801	2926	3048
Cooling Air requirement	t/h	Bidder to furnish the quantity in their offer				
03.02.02	<p>Important notes to bidders:</p> <ol style="list-style-type: none"> 1. <i>Package vendor shall consider suitable margin on the equipment/system design based on their experience and data available with them in the past executed projects of similar plant.</i> 2. <i>Bidder to note that bulk density may vary slightly with actual ash generated for the unit under operation.</i> 3. <i>DBA Conveyors, Crushers and associated system shall be designed to take care of 1000 mm ash clinkers in normal operation.</i> 4. <i>Drain traps with blind flanges at the bottom of DBA conveyor shall be provided at suitable locations to drain out excess burnt oil received during boiler light up.</i> 5. <i>Suitable Inspection windows & doors (Quick open type) shall be provided over the top of DBA conveyors and sideways in horizontal and inclined portion of conveyors. Location and nos. shall be decided detailed engineering.</i> 6. <i>In case of any emergent stoppage of downstream dry bottom ash conveyors, bottom doors/isolation gate cum jaw crushers (as applicable) shall be closed within 10 minutes.</i> 7. <i>Automatic sensor mechanism to operate pre-crushers/isolation gate cum jaw crushers (as applicable) in case of larger ash clinkers as and when required to avoid manual interference.</i> 					

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	8.	<i>Anemometer shall be provided by bidder. Bidder to measure and monitor the air flow allowed through DBA system and regulate the total air flow within permissible limit defined by BHEL.</i>
	9.	<i>The ash particle output size from the secondary crushers below BA intermediate silo shall be (-) 25 mm. Bidder shall ensure that ash particles of max (-) 25 mm only shall be fed to the bottom ash belt conveyor (Bottom ash belt conveyor is in other's package scope) below BA intermediate silo.</i>
	10.	<i>Ash handling vendor to guarantee the cooling air quantity and ash temperature leaving dry bottom ash handling system for various loads as per above table.</i>
	11.	<i>Ash leaving temperature (from dry handling outlet) for bottom ash should be limited to 300 deg C at 2nd DBA conveyor discharge end before entering in to BAIM silo. Maximum air through furnace bottom hopper (via dry ash handling system) not to exceed values as mentioned in above table.</i>
	12.	<i>Maximum temperature of ash discharging from BAIM silo shall not exceed 150 Deg C before it is fed to bottom ash rubber belt conveyors.</i>
	13.	<i>The total air quantity for cooling of Bottom Ash and ECO Ash shall be limited to 2.5 % of total Combustion air at corresponding load and it is applicable for DBA Package tender. Successful bidder shall demonstrate the discharge temperature of ash and cooling air quantity during PG Test of Boiler.</i>
	14.	<i>Bidder shall consider suitable temperature monitoring system of required numbers of thermocouples in Bottom Ash Hopper. The exact location and number of thermocouples shall be finalized with BHEL/DVC during detail engineering.</i>
	15.	<i>The sketch of Bottom Ash Intermediate silo is enclosed to indicate minimum elevation required for belt conveyor floor.</i>

03.02.03	Evacuation Timing/Design Criteria: -			
	Sl. No.	System	Evacuation timing	Design margin
	1	Bottom Ash &	<i>1st stage DBA conveyor: - Continuous ash evacuation from the dry bottom ash hopper below the boiler furnace</i>	<i>150% of Bottom ash generation at 100% BMCR with worst coal. Designed capacity of conveyor is 108 TPH</i>

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	2	Bottom Ash & Eco ash	<i>2nd stage DBA conveyor: Continuous ash evacuation</i>	<i>150% of Bottom and Eco ash at 100% BMCR with worst coal. Designed capacity of conveyor is 129.5 TPH</i>
	3	Eco ash	<i>Eco ash conveyors: Continuous ash evacuation</i>	<i>150% of Eco ash at 100% BMCR with worst coal. Designed capacity of conveyor is 21.5 TPH</i>
03.02.04	<p>Instrument Air System</p> <p>Instrument Air Line with isolation valve shall be terminated by Main Ash Handling Package Vendor (Package-II) at terminal points near Boiler area (Approx. 100 meters from Bottom Ash Hopper of Unit#3 & Unit#4). Further distribution to the application point shall be done by DBA vendor.</p>			
03.02.05	<p>Common Water System</p> <p>The water requirement for the complete Dry Bottom Ash handling system package shall be met through Ash Conditioning water pumps specified in the DVC single line flow diagrams and DVC specification. Bidder to consider necessary items as required for completion of the water requirement of dry ash handling system.</p> <p><u>The following points also to be noted by bidder</u></p> <ol style="list-style-type: none"> 1. Total CTBD water required for Ash conditioner at BAIM Silo and cooling water for dry BA conveyor and dust suppression system for BAIM Silo shall be limited to 140 M3/hr for both units. 2. BHEL PEM shall provide the water near approx. 100 meters from Dry Bottom Ash Hopper of Unit#3. 3. Storage and distribution through Conditioning water Pumps from Conditioning water tank to Unit 3 and Unit 4 Boiler area and BAIM Silo area with pipe, valves, fittings, instruments along with all accessories are in Bidder scope. 			
03.02.06	<p>Miscellaneous Equipment</p>			

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	<p>Apart from the dry bottom ash handling system, there are other auxiliary system/equipment like Electric & Manual Hoists, Chain Pulley blocks, Cranes, Cooling water distribution within the Dry Bottom Ash area from the terminal points (As defined elsewhere), CTBD Water line for Ash Conditioner and dust suppression system for BAIM Silo etc. are to be provided by bidder as per the NIT specification. <i>Bidder to note that any other items/equipment as required for completion of the dry bottom ash handling system shall also be considered in the scope of supply of the bidder. All the items apart from specifically excluded under exclusion section in this specification for Dry Bottom Ash System are to be considered in the bidder's scope. Bidder may raise pre-bid queries for scope clarity during the pre-bid meeting itself, post award and afterwards after award of the contract any other interpretation shall not be entertained, which are not in line with the intent of the specification/BHEL's interpretation.</i></p>
03.02.07	<p>NOTES TO BIDDERS</p> <p>Apart from the above, Bidder shall include/ consider the following also in his scope.</p> <ol style="list-style-type: none">1. It is the total responsibility of the bidder to make the system complete in all aspect before handing over.2. If the system is not working properly or the system has some inherent design flaws, in such a case, the successful bidder will be liable to correct the system without any price implication to BHEL and BHEL's decision will be final and binding in such cases. Also, the system has to be designed as per best industry practice while taking worst case scenario into account if nothing is mentioned in the technical specifications furnished by DVC/BHEL.3. Supply of all consumables like lubricants, oil, grease etc. for initial flushing at site, first fill during commissioning and replenishment/replacement of the same till handing over of the plant to DVC is in the scope of bidder. Any oil, if lying in the equipment shall be drained at site and shall be refilled with new oil during commissioning. Special tools and tackles (as required), commissioning/start up spares required for the equipment/system supplied by the bidder shall be in the scope of bidder.4. Cleaning of any debris produced by the bidder during E&C shall be done immediately at each front.5. As required, minimum two times cleaning of all debris and ash of Dry Bottom Ash Hopper and ECO Hoppers at the time of Boiler light up and coal synchronization is in bidder scope, whether DBA system is ready or not ready.

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6. Approach road, drains, Chipping and levelling/ grading near erection location of Dry Bottom Ash Package is in Bidder scope.
7. Bidder shall include the responsibility of technical coordination (including participation in technical co-ordination meetings with DVC/ DVC's Consultant /BHEL), finalization of drawings/ documents, submission of engineering drawings/ documents and processing of their approvals by DVC/ DVC's Consultant /BHEL. Bidder shall be solely responsible for submission & getting approval of drawings/ layouts/ flow diagrams/ data sheets/ QAP/ Field Quality Plans/ Commissioning procedures/ O&M manuals/ as built drawings after E&C of all equipment/ PG test procedures/ Testing Procedures from DVC/ DVC's Consultant /BHEL in time and shall plan the activities accordingly. Bidder shall co-ordinate & attend meetings with customer and also with other units of BHEL for finalizing the Dry Bottom Ash Layout, drawing approval and for any other input information as required.
8. Bidder shall participate in the monthly project/engineering review meeting or the review meeting proposed by DVC/ DVC's Consultant /BHEL as and when required with status reports at BHEL HQ/Customer's place/KODERMA Site office. Bidder's technical team has to visit project site time to time to resolve the interface issues/technical issues arises during erection, if any. Further, as built drawings preparation/submission is also in the scope of the bidder.
9. Project monitoring & execution team dedicated for this project including the organization chart till completion of the project shall be furnished by successful bidder.
10. Monthly progress report including condition/status of material available in store, as per BBU.
shall be submitted on 5th of every month by the successful bidder.
11. The design, manufacture, inspection and testing of the equipment shall comply with all the currently applicable statutory regulations and safety codes in the locality where the equipment in to be installed and shall also confirm to the latest edition of Indian and other international standards and codes. Nothing in this specification shall be construed to relieve the bidder of the required statutory responsibility. In case of any conflict & ambiguity in the standard to be followed the decision of the BHEL/DVC/ DVC's Consultant shall be final and binding.
12. In case of any ambiguity, conflict in the standard & specification &/or interpretation of clauses in this enquiry spec. and its enclosures the decision of BHEL shall be final

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and binding and any change due to this shall have no price implication on BHEL and shall have to be absorbed by successful bidder.

13. Clarifications, if any shall be sorted out, before submission of the bid. Bidder's shall raise all ambiguities, conflict in the standard & specification and/or interpretation of clauses, if any, in this enquiry spec. and its enclosures during pre-bid stage itself, failing which it shall be understood that bidder has no issue and at later date successful bidder shall have no right to take any technical and commercial advantage out of any ambiguity, conflict in the standard & specification and/or interpretation of clauses and the decision of BHEL shall be final and binding and any change due to this shall have no price implication on BHEL and shall have to be absorbed by successful bidder.
14. Bidder shall strictly follow and adhere to the guidelines laid down in the enclosed BHEL's health, safety and Environment manual (HSE).
15. During detail engineering, bidder to strictly adhere to BHEL/DVC'S Consultant /DVC drg. Formats, document numbering, quality plan & FQP formats.
16. During detail engineering, successful bidder has to submit all the drawings/documents and any other documentation through ISG based Document Management System (DMS) like Wrench portal, etc. Bidder would be provided access to the DMS for drawing. /doc. approval and adequate training manuals will be available to bidder; which bidder has to get conversant with. Necessary IT related information will have to be collected by successful bidder after award of contract, by coordinating with BHEL-ISG IT team. All the documentation flow should happen in ISG document management system only.
17. Quality assurance and inspection of equipment shall be as per DVC specification. However, modalities of inspection (Stage, Final, In-process) shall be finalized during detail engineering after submission of quality assurance plan (QAP).
18. Bidder shall submit the signed and stamped copy of all the pages which constitutes this technical enquiry specification signed by authorized signatory and clearly mentioning each clause under following two categories to avoid any ambiguity in scope understanding & the scope division as a technical offer during bidding. Digitally signed copy of all the pages of the technical specification is acceptable.
19. "Bidder to note "technical deviation" from the enclosed DVC bid document and the pre-bid MOM, amendments and clarifications is not acceptable.
20. Quality of effluent outgoing from the plant shall conform to latest norms of Environment Pollution Control.

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	<ol style="list-style-type: none">21. For Technical discussions regarding any erection issues related to erection drawings/supplies, any modification at site due to site conditions, bidder shall depute concerned engineers to site/customer place to resolve the issue as well as submission of related revised drawings. As built drawings shall be submitted by the successful bidder after visiting the site from time to time by their engineering personnel to note the modifications and incorporate in drawings.22. The successful bidder has to submit all the Self Manufacturing Items (SMI) drawings and QAP within two months of LOA.23. Successful bidder has to place the order of all the BOI and provide the unpriced Copy of PO of the Bought-out Items (BOI) to BHEL for information & Record.24. Bidder to extend all help and documentary support for compliance and addressing any statutory issues raised by DVC/BHEL which pertains to the area / work under bidder's scope.25. Bidder to refer SUB- VENDORS LIST available with DVC NIT specification/amendment (Annexure-6 &7). Additional sub-vendor list of only successful bidder is subjected to end user's approval. Successful bidder will get 90 days from LOA to submit all requisite supporting documents of sub-vendors for approval by end user/BHEL. Any sub-vendor approval not approved by end user or going beyond 90 days by any means from LOA shall not be considered for procurement by BHEL and in such event Successful bidder will go ahead with procurement from only approved sub-vendors, without any price implication to BHEL-ISG. Delay in any new vendor approval from end user shall not be considered for delay analysis.26. Bidder shall consider training module to end-user for Dry Bottom Ash handling system package as per the DVC NIT specification.27. Bidder shall consider safety induction and training as per the DVC NIT specification.28. Implementation of Smart project Management system shall as per DVC Specification.29. Bidder to intimate BHEL with incident report for any theft/fire with proof of document & FIR within a week.
03.02.08	<p>TECHNICAL SPECIFICATION -ELECTRICAL & C&I SCOPE OF WORK</p> <p>Complete Electrical and C&I System for Ash Handling System is in the scope of bidder. Refer Annexure-10 for detailed scope of Electrical & C&I Scope of bidder.</p>

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-III : SCOPE OF SUPPLY AND SERVICES

03.02.09	<p>Inspection and Testing</p> <ol style="list-style-type: none">1. Bidder shall give 15 days' advance written notice of equipment being ready for testing. The customer / Inspector, unless the witnessing of the tests is virtually waived, will attend such tests within 15 days of the date on which the equipment is notified as being ready.2. Type & routine test report / certificates shall include details of standard to which the tests are performed, test parameters, acceptance criteria, test set up etc. used during the testing along with the test piece details / rating and the detailed test record and final test result.3. All inspection, measuring and test equipment used by the contractor shall be calibrated periodically. Bidder shall maintain all relevant records of periodic calibration, instrument identification, and shall provide for inspection by bidder wherever asked specifically; bidder shall calibrate measuring / testing equipment in the presence of employer.4. The details of the checks to be carried out for various components (MQP) are to be submitted within one month from the date of Purchase order by bidder for customer approval. Bidder shall refer QA part of DVC NIT specification while preparing MQP of various AHP equipment.5. Bidder's representative has to be present during joint inspection by BHEL/BHEL's TPI/Customer/Customer's consultant of their Bought-out items at their sub-vendor's works irrespective of approved QAP6. Bidder to ensure correctness of all the bidder's supplied items (Cat-III items as per approved inspection category document) in every aspect meeting approved drawings/datasheets/specification. Based on COC provided by bidder in BHEL format, BHEL will arrange MDCC from DVC.
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TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-IV: CIVIL AND STRUCTURAL WORKS

04.00.00	CIVIL STRUCTURAL AND ARCHITECTURAL SCOPE OF WORK:
04.01.00	Civil and structural works for the Dry Bottom Ash Handling System Package-1 are as per the scope matrix (Annexure-9).
04.02.00	The Bidder shall ensure that once inputs are released for civil design and drawings, no subsequent changes shall be made. In the event that any modifications become unavoidable and alterations are required after completion of civil works, such modifications, including both design and construction (after approval from BHEL), shall be carried out by bidder without any extra claim to BHEL.
04.03.00	The bidder shall ensure that the column positions of the Dry Bottom Ash Hopper should be in line with executed foundation/pedestals footprint (Refer Drawing No. IS-1-GA-776-301-C004). In case of any inevitable modification required without changing the overall stability of foundation such modifications (Design & Construction) shall be carried out by bidder without any extra claim to BHEL.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-V : ERECTION & COMMISSIONING, OPERATION & MAINTENANCE

05.00.00	ERECTION & COMMISSIONING, OPERATION & MAINTENANCE
05.01.00	<p>Erection Conditions of Contract</p> <p>Bidder has to consider and envisage mobilization of all resources required, including manpower, in a shortest possible time during execution time. For this bidder has to consider advance resource planning so that erection by the successful bidder is not delayed.</p>
05.02.00	<p>Site Activities</p> <p>All site activities, including unloading, receipt, storage, security, and handling of materials, civil and structural works under the bidder's scope, as well as handling of BHEL's free-issue items under this package, erection and commissioning, trial run, performance guarantee (PG) test, and final handover of the complete system to the customer, shall be in the scope of the bidder.</p> <ol style="list-style-type: none"> 1. During erection work, the bidder shall ensure correct implementation of the approved design and execution of civil and structural works as per drawings, specifications, and standards. Any deviations shall be reported to BHEL and resolved with prior approval. 2. Storage space shall be allotted by BHEL/Customer either inside/outside the plant premises based on availability of space. Further levelling/ grading shall be done by bidder for proper storage of material. 3. Vendor to ensure sufficient manpower throughout the project for erection and commissioning activities on all equipment's, systems etc. 4. Erection of all items shall be in line with the "Erection & Commissioning manual" 5. Cost of repair/replacement of damaged equipment /parts, if any, including material & maintenance works shall be borne by successful bidder. 6. The fabrication yard, the open yard and closed yard shall be relocated as per the project requirements. The vendor must ensure appropriate lifting arrangements and manpower for shifting the items to the desired location, without any cost implication to BHEL
05.02.01	<p>NOTE:</p> <ol style="list-style-type: none"> a) Bidders have to give their Organization chart for the site activities along with the offer. b) In case Bidder fails to maintain the minimum manpower/site staff at site till project completion, suitable pro-rata deductions as per BHEL prevailing rates, shall be recovered from the Bidder.

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-V : ERECTION & COMMISSIONING, OPERATION & MAINTENANCE

	<p>c) Please refer complete Erection Condition of Contract as per NIT specification. Bidder shall strictly adhere to the same and follow the erection & commissioning terms and conditions.</p> <p>d) Required water (through tankers/bore wells) for leakage testing (As applicable) of Bottom Ash hopper shall be arranged by bidder in the absence of service water at the nearest place, without any cost implication to BHEL.</p> <p>e) Calibration of instruments before commissioning is included in bidder 'scope.</p> <p>f) All type of testing shall be performed by bidder during erection & commissioning stage without any cost implication to BHEL.</p>
05.02.02	<p>Whenever power fails, DG back up is required. DG set to be arranged and kept as standby by bidder, whenever required. Also, for carrying out works where power sockets are not available. The construction power source shall be relocated according to the project requirements. The vendor must arrange temporary cable connection with accessories to the working location of the Ash handling system, without any cost implication to BHEL.</p>
05.02.03	<p>Bidder shall depute their engineers at site for checks during civil works. Bidder shall ensure that civil interface works are done as per their civil input drawings.</p>
05.02.04	<p>Operation and Maintenance of Ash Handling System:</p> <p>The operation and Maintenance of this Dry Bottom Ash Handling package and BHEL supplied Equipment's for this DBA package till hand over the Dry Bottom Ash Handling System to DVC shall be in bidder scope. Bidder to ensure deputation of sufficient manpower for operation of the plants in shifts as per the site requirement. Bidder to note that all consumables/tool tackles /manpower required during the period of O&M, shall be included in the scope of bidder and no additional payment will be made by BHEL in this regard.</p> <p>* In case the handover of the DBA system to Owner is delayed beyond 12 months from date of Completion of facilities for the reason not attributable to Bidder, Bidder shall be entitled for pro-rata payment against O&M activities for the extended period based on the price break-up (Annexure-28) fixed against O&M which shall be valid during extended period until handover of the DBA system to the Owner.</p>

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-V : ERECTION & COMMISSIONING, OPERATION & MAINTENANCE

05.03.00	The design, engineering, manufacture, inspection and testing of the equipment shall comply with all the currently applicable statutes, regulations and safety codes in the locality where the equipment is to be installed and shall also conform to the latest edition of Indian and other international standards and codes. Nothing in this specification shall be construed to relieve the contractor of the required statutory responsibility. In case of any conflict & ambiguity in the standard to be followed the decision of BHEL/End User shall be final and binding.
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TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-VI : SPARES

06.00.00	SPARES Bidder's scope shall include supply and handing over of Mandatory Spares of all equipment as mentioned in DVC NIT Specification and start-up & Commissioning spares. Special and separate packing & box-marking for items meant for mandatory spares including tools and tackles which are to be handed over directly to customer, is required. Mandatory spares shall be dispatched separately and not along with the main equipment, based on actual status of the project and clearance from site.
06.01.00	Mandatory Spares Spares shall be despatched in pre-decided lots in containers/secure boxes. All boxes/containers shall be distinctly marked in red colour with boldly written "S" mark on each face of the containers/secure boxes as indication of items to be directly handed over to customer. BBU number should be put on the items in a durable manner (Punching/painting, etc.) so that the items can be easily linked with approved BBU for ease of handing over to customer. Expiry date for short shelf life items (oils, chemicals, insulation materials, etc.) should be put on the item as well as the packing box. The following points also to be noted by bidder <ol style="list-style-type: none">1. In case spares indicated in the list are not applicable to the particular design offered by the bidder, the bidder should offer spares applicable to offered design with quantities generally in line with approach followed in the above list.2. In case the bidder indicates against any item mentioned above as "Not applicable (NA)" and later it is found to be applicable, bidder shall supply such spares free of cost without any price implication to BHEL.3. The description of various items is only indicative and shall be supplied according to approved drawings/ Data sheets.4. The spares for the equipment's shall pertain to the specific equipment's only. In case, if found at any stage of the project, that the spares supplied by the bidders are not fitting or not matching, the same shall be supplied again by the bidder without any cost implication to BHEL.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-VI : SPARES

06.02.00	Commissioning spares Startup and commissioning spares as required for the completion and commissioning of DBA System are to be dispatched to the site prior to the requirement of commissioning of equipment/system(s).
06.03.00	Recommended Spares In addition to the mandatory spares, the Contractor shall also provide a list of recommended spares giving unit prices and total prices for 3 years of normal operation of the plant for spares of indigenous origin, and for 5 years of normal operation for spares of non-indigenous origin. This list shall take into consideration the mandatory spares specified elsewhere in the specification and should be a separate list.
06.04.00	Start-up Commissioning, Operation and Maintenance Spares Start-up and commissioning spares are those spares which may be required during the start-up and commissioning of the equipment/system. All spares used till the plant is handed over to the employer shall come under this category. The Contractor shall provide for an adequate stock of such start up and commissioning spares to be brought by him to the site for the plant erection and commissioning. They must be available at site before the equipments are energized. The unused spares, if any, should be removed from there only after the issue of Taking Over certificate. All start up spares which remain unused at the time shall remain the property of the Contractor.
06.05.00	Work instructions for storage & handing over of mandatory spares to DVC: - Following work instructions for storage & handing over of mandatory spares shall be complied and ensured by the bidder: <ol style="list-style-type: none">1. Spares shall be sent in pre-decided lots in containers/secure boxes. This shall be applicable to both shop items as well as BOIs.2. All boxes/containers are to be distinctly marked in red color with boldly written "S" mark on each face of the containers3. Unless technically not feasible, BBU number should be put on the item(s) in a durable manner (punching/painting, etc.), so that items can be easily linked with approved BBU for ease of handing over to customer.4. Expiry date for short shelf life items (oils, chemicals, insulation material etc.) should be put on the item as well as on the packing box.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-VI : SPARES

	<ol style="list-style-type: none"> 5. Storage, safety of boxes/items and maintaining requisite inventory records will be the responsibility of bidder's representative at site. 6. Bidders shall make periodic checks for safety of boxes/items, as the case may be. 7. For handing over of mandatory spares, getting MRC from customer and physical reconciliation with customer shall be the joint responsibility of the bidder's site representative and BHEL's site representative.
06.06.00	<p>SPECIAL TOOLS & TACKLES AND TEST/MEASURING EQUIPMENT</p> <p>One set of all special tools and tackles including testing, calibrating and measuring instruments required for erection, assembly, disassembly and maintenance & testing of all equipment/systems for the package shall be supplied by the Bidder. The Bidder shall not use these special tools, tackles and testing/measuring equipment for erection/commissioning purposes and shall be new and in an unused condition, when they are handed over to the Employer.</p>
06.07.00	<p>General</p> <ol style="list-style-type: none"> 1. All spares supplied under this contract shall be strictly interchange-able with the parts for which they are intended to replace. The spares shall be treated and packed for long storage under the climatic conditions prevailing at the site, e.g. small items shall be packed in sealed transparent plastic bags with desiccators' packs as necessary. 2. Each spare part shall be clearly marked or labeled on the outside of the packing with the description. When more than one spare part is packed in a single case, a general description of the contents shall be shown on the outside and a detailed list enclosed. All cases, containers and other packages must be suitably marked and numbered for the purpose of identification. 3. All cases, containers or other package are liable to be opened for examination as may be considered necessary by the Engineer. 4. All mandatory and recommended spares shall be delivered to site at least two months before the scheduled date of the trial operation of the plant. However, they shall not be dispatched before the dispatch of the associated main equipment. 5. The Vendor will provide all the addresses and particulars of his sub suppliers while placing the order on vendors for items/components/equipments covered under the contract and will further ensure with his vendors that BHEL/ end user, if so desires, will have the right to place

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-VI : SPARES

	<p>order for spares directly on them on mutually agreed terms based on offers of such vendors.</p> <p>The bidder to provide datasheets/assembly drawings of the manufacturer/ any other relevant document showing Bill of Material(s), Make, Model Number, Part Number etc. through which the mandatory spares to be supplied can be uniquely identified.</p>
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TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-VII : LIMITING GUARANTEE POWER AND FUNCTIONAL
GUARANTEE

07.00.00	LIMITING GUARANTEE POWER AND FUNCTIONAL GUARANTEE
07.01.00	<p>Station Auxiliary Power Consumption</p> <p>The station auxiliary power consumption for the subject package shall not exceed 350 KW indicated in Annexure-15. Bidder shall furnish equipment wise power consumption for list of equipment drives with corresponding weightage factors. Liquidated damages shall be applied on account of shortfall in auxiliary power consumption during PG test.</p>
07.02.00	BHEL shall levy LD of guaranteed power consumption for any increase per kW at the rate of US \$ 6033 (US Dollar Six Thousand and Thirty-Three only) per 1 kW increase in unit Auxiliary Power Consumption.
07.03.00	Declaration for Functional Guarantees shall be submitted to BHEL in line with end user's technical specification Sec-VI, Part-A, Sub sec-IV, Functional Guarantees & Liquidated Damages.
07.04.00	<p>Performance guarantee</p> <p>The parameters/capabilities to be demonstrated for various systems/ equipment shall as per functional guarantees chapter of DVC NIT specification and amendments (Annexure-6&7). Liquidated damages shall be applicable on account of shortfall in equipment guaranteed parameters during PG test.</p>
07.05.00	Bidder to furnish the guarantee declaration as per enclosed ANNEXURE-16 .
07.06.00	<p>The guarantee tests for various equipment and systems shall be carried out as specified under chapter of Functional Guarantees. All special equipment, tools and tackles, instruments, measuring devices required for the successful conductance of Guarantee Tests shall be provided by the Bidder, free of cost. All costs associated with the tests shall be included in bid price.</p> <p>All statutory clearances necessary for guarantee tests shall be obtained by the bidder from respective authorities without any additional cost to BHEL.</p>

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CHAPTER-VIII : FACILITIES TO BE PROVIDED BY THE OWNER/ BHEL

08.00.00	FACILITIES IN THE SCOPE OF CONTRACTOR/BHEL			
Sl. No	Description	Scope		Remarks
	PART I	BHEL	Bidder	
08.01.00	Establishment:			
08.01.01	For Construction Purpose:			
a	Open space for office (as per availability within project premises)	Yes		Location will be finalized after joint survey with owner.
b	Open space for storage (as per availability within project premises)	Yes		Location will be finalized after joint survey with owner.
c	Construction of bidder's office, canteen and storage building including supply of materials and other services		Yes	
d	Bidder's all office equipment, office / store / canteen consumables		Yes	
e	Canteen facilities for the bidder's staff, supervisors and engineers etc.		Yes	
f	Firefighting equipment like buckets, extinguishers etc.		Yes	
g	Fencing of storage area, office, canteen etc. of the bidder		Yes	
08.01.02	For living purpose of the bidder:			

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08.00.00	FACILITIES IN THE SCOPE OF CONTRACTOR/BHEL			
Sl. No	Description	Scope		Remarks
	PART I	BHEL	Bidder	
a	Open space for labour colony		Yes	Contractor has to make his own arrangements for land (outside the plant), shelter and transportation of labour as per requirement.
b	Labour Colony with internal roads, sanitation, complying with statutory requirements		Yes	Construction Plan shall be approved by BHEL
08.02.00	Electricity			
08.02.01	Electricity for site fabrication/ construction purposes (for Site/Project works only) 3 Phase 415/440 V within project premises			Refer CI 08.11.00
a	Single point source	Yes		
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
08.02.02	Electricity for office, stores, canteen etc. of the bidder within project premises			
a	Single point source	Yes		Refer CI 08.11.00
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	

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08.00.00	FACILITIES IN THE SCOPE OF CONTRACTOR/BHEL			
Sl. No	Description	Scope		Remarks
	PART I	BHEL	Bidder	
08.02.03	Electricity for living accommodation of the bidder's staff, engineers, supervisors, labour Hutment etc-			Contractor has to make his own arrangements for outside plant boundary.
a	Single point source		Yes	
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Payment/Duties and deposits including statutory clearances if applicable		Yes	
08.03.00	Water Supply			
08.03.01	For construction purposes:			
a	Making the water available at single point	Yes	Yes	
b	Further distribution as per the requirement of work including supply of materials and execution.		Yes	
08.03.02	Water supply for bidder's office, stores, canteen etc.			Refer CI 08.12.00
a	Making the water available at single point	Yes	Yes	
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-VIII : FACILITIES TO BE PROVIDED BY THE OWNER/ BHEL

08.00.00	FACILITIES IN THE SCOPE OF CONTRACTOR/BHEL			
Sl. No	Description	Scope		Remarks
	PART I	BHEL	Bidder	
08.03.03	Water supply for Living Purpose			Contractor has to make his own arrangements for outside plant boundary.
a	Making the water available at single point		Yes	
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
08.04.00	Lighting			
a	For fabrication/construction work (supply of all the necessary materials) 1. At office/storage area 2. At the preassembly area 3. At the construction site /area 4. At fabrication shop		Yes	
b	For fabrication/construction work (execution of the lighting work/ arrangements) 1. At office/storage area 2. At the preassembly area 3. At the construction site /area		Yes	
c	Providing the necessary consumables like bulbs, switches, etc. during the course of project work		Yes	
d	Lighting for the living purposes of the bidder at the colony / quarters		Yes	

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-VIII : FACILITIES TO BE PROVIDED BY THE OWNER/ BHEL

08.00.00	FACILITIES IN THE SCOPE OF CONTRACTOR/BHEL			
Sl. No	Description	Scope		Remarks
	PART I	BHEL	Bidder	
08.05.00	<i>Communication facilities for site operations of the bidder</i>			
a	Téléphone, fax, internet, intranet, e-mail etc.		Yes	
08.06.00	<i>Compressed air wherever required for the work</i>			
08.07.00	<i>Demobilization of all the above facilities</i>			
08.08.00	<i>Transportation</i>			
a	For site personnel of the bidder		Yes	
b	For bidder's equipment and consumables (T&P, Consumables etc.)		Yes	
08.09.00	<i>Erection/Site Fabrication Facilities</i>			
08.09.01	Engineering works for construction/site fabrication:			
a	Providing the erection/constructions drawings for all the equipment covered under this scope		Yes	
b	Drawings for construction methods		Yes	In consultation with BHEL
c	As-built drawings where ever deviations observed and executed and also based on the decisions taken at site		Yes	Changes are to be marked in drawing & handover to BHEL on completion of work.
d	Shipping lists etc. for reference and planning the activities		Yes	

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CHAPTER-VIII : FACILITIES TO BE PROVIDED BY THE OWNER/ BHEL

08.00.00	FACILITIES IN THE SCOPE OF CONTRACTOR/BHEL			
Sl. No	Description	Scope		Remarks
	PART I	BHEL	Bidder	
e	Preparation of fabrication/construction / erection schedules and other input requirements as per Form-14.	Yes	Yes	In consultation with BHEL
f	Review of performance and revision of site construction / erection schedules in order to achieve the end dates and other commitments	Yes	Yes	In consultation with BHEL
g	Weekly fabrication/construction / erection schedules based on Sl. No. e		Yes	In consultation with BHEL
h	Daily work plan based on Sl. No. g		Yes	In consultation with BHEL
i	Periodic visit of the senior official of the bidder to site to review the progress so that works is completed as per schedule. It is suggested this review by the senior official of the bidder should be done once in every two months.		Yes	
j	Preparation of preassembly bay		Yes	
k	Laying of racks for gantry crane if provided by BHEL or brought by the contractor /bidder himself		Yes	
08.09.02	Land/Open Space: BHEL shall provide free of charge limited open space for office, storage shed and laydown area ONLY IF and “as and where” made available by Customer. Availability of land within plant boundary			

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-VIII : FACILITIES TO BE PROVIDED BY THE OWNER/ BHEL

	is very limited and the contractor has to plan and use the existing land considering the use of land by other Civil /mechanical/ electrical contractors and the storage of plant machineries and materials. The existing land shall be shared by all erection agencies. It is the responsibility of the contractor to construct sheds, fabrication yard, establish batching plant, provide all utilities and dismantle and clear the site after completion of work or as and when required, as a part of his scope of work.
08.09.03	Labour and Staff Colony: Following are in the Bidder's scope of work for labour & staff colony:
a)	Labour colony is to be developed by bidder for all the labourers required to be deployed for their scope of work. Labour colony set-up is to be developed in compliance of statutory requirements. Ownership of the labour hutment shall be of the contractor and contractor shall keep BHEL indemnified from any statutory obligations / legal compliances w.r.t. labour hutment establishment during as well as after the completion of contract.
b)	Land for labour colony shall be arranged by Contractor at their own cost as per availability outside project area within 5Km, Necessary levelling/dressing of allotted land shall be done by the contractor. All arrangement for electricity and drinking/service water to be arranged by the contractor within his quoted price.
c)	Development of Bidder's temporary staff colony and labour colony shall have adequate no. of rest rooms along with toilets & fencing etc.
d)	All Civil and Structural work associated with drinking and service water for Bidder's labour and other personnel at the work site/colony/offices including pump houses, pipes, overhead tank, tube wells etc. shall be in the scope of contractor.
e)	Providing and maintaining facilities for safety, welfare, drinking water and sanitation, hygiene, biennial health check-up etc. for construction workers at their workplaces as well as at labour & staff colonies.

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-VIII : FACILITIES TO BE PROVIDED BY THE OWNER/ BHEL

f)	Development and maintenance of above facilities for construction workers deployed by the Contractor shall solely rest with the Contractor.
g)	Bidder shall comply with the following for workmen accommodation <ul style="list-style-type: none">• General Layout of Sheds at Worker's Establishment• Standard guidelines for labour colony or worker accommodation.• Typical layout for workmen shed For above documents refer Annexure- 24,25,26

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-VIII : FACILITIES TO BE PROVIDED BY THE OWNER/ BHEL

08.10.00	<p>Installation of necessary amenities- and temporary infrastructure for construction activities at Project site locations.</p> <p>Following are the minimum amenities to be provided by the bidder within the quoted price including removal/disposal of the same in environment friendly manner after its intended use/completion of scope of work:</p> <ul style="list-style-type: none">i. Labour rest sheds near work spot.ii. Canteen facility creation.iii. Drinking water facility.iv. Labour Bio toilets near work spot in sufficient nos. with regular cleaning & maintenance arrangement.v. Labour colony should have all hygienic condition, dining hall, toilets, proper sewerage system, good drinking water arrangements.vi. Statutory documents shall be submitted along with RA Bills for processing of Bills.
08.11.00	<p>Construction/Site Fabrication Power:</p>
a)	<p>Construction power (three phase, 415 V/ 440 V) will be provided on chargeable basis at one point near the site at a distance of approx. 500M. Contractor shall be responsible for fulfilment of all requirements including statutory requirements in this regard. Contractor shall deploy and install required energy meter, cables, fuses, distribution boards, switchboards, bus bars, earthing arrangements, protection devices and any other installation as specified by statutory authority/act. Contractor shall also obtain approvals of appropriate authority and pay necessary fees, levies etc. towards the clearance of such installations, prior to use. Sufficient power factor compensation equipment like capacitor shall be provided by contractor for reactive loads like welding machines etc. In case of any fine/penalty on account of low power factor, same shall be shared by contractor proportionately according to power consumption.</p>

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-VIII : FACILITIES TO BE PROVIDED BY THE OWNER/ BHEL

	<p>Contractor has to deploy DG Sets to meet power requirement in case of delay in availability of single source or any kind of power interruptions during the course of the project at no extra cost to BHEL.</p> <p>If any other voltage level (other than normally available) is required, the same shall be arranged by the contractor from power supply as above. Contractor shall be responsible for fulfilment of all requirements including statutory requirements in this regard.</p>
b)	<p>Contractor shall deploy and install required cables, fuses, distribution boards, switchboards, bus bars, earthing arrangements, protection devices and any other installation as specified by statutory authority/act.</p>
c)	<p>Sufficient power factor compensation equipment like capacitor shall be provided by contractor for reactive loads like welding machines etc. In case of any fine/penalty on account of low power factor, same shall be shared by contractor proportionately according to power consumption.</p>
d)	<p>Contractor shall make necessary arrangements for onward distribution of construction power taking due care of surrounding construction activities like movement of cranes & vehicles, civil work, fabrication/construction/assembly/ erection etc. and safety of personnel. It may become necessary to relocate some of the installations to facilitate work by other agencies or by themselves.</p>
e)	<p>It shall be the responsibility of the Contractor to provide, maintain the complete installation on the load side of the supply with due regard to the safety requirements at site. All cabling and installations shall comply in all respects with the appropriate statutory requirements. The installation and maintenance of this shall be done by licensed and experienced electrician.</p>
f)	<p>While reasonable efforts will be made to ensure continuous electric power supply, interruptions cannot be ruled out and no claim from the Contractor shall be entertained on this account such as idle labour, extension of time etc. The Contractor shall adjust his working shift accordingly and deploy additional manpower, if necessary, so as to achieve the target.</p>
g)	<p>Contractor to note that till construction power is made available by BHEL; contractor shall make his own arrangement like DG set etc. The contractor shall also take the approval/ permission of</p>

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-VIII : FACILITIES TO BE PROVIDED BY THE OWNER/ BHEL

	statutory authorities for his DG set installation. The Contractor has to make his own arrangement for the same as required to carry out the job under the scope of work within the quoted rate. Nothing extra shall be paid on this account of DG set up and running for construction and office maintenance etc.
h)	Contractor shall be well equipped with back-up power supply arrangement like DG set and diesel operated welding machine etc. to tackle situations arising due to failure of supplied power, so as to ensure continuity and completion of critical processes that are underway at the time of power failure or important activities planned in immediate future.
i)	BHEL is not responsible for any loss or damage to the Contractor's equipment as a result of variations in voltage or frequency or interruptions in power supply.
j)	The bidder will have to procure & install General mobile illumination system during construction right from start of his work. This system will include temporary pole lighting, portable lighting towers with DG back-up, within the quoted price. The illumination should be such that minimum illumination requirement as specified by Indian standards for general illumination is maintained.
k)	Supply of electricity shall be governed by Indian Electricity Act and Installation Rules and other Rules and Regulation as applicable. The contractor shall ensure usage of electricity in an efficient manner and the same may be audited by BHEL time to time. 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.
08.12.00	Construction water:
a)	Contractor has to make his own arrangements for construction water. However, drawl of construction/ potable water from the bore-well may be permitted if found suitable. Any statutory clearance required shall be obtained by the contractor. Assistance, if required shall be provided by the BHEL/Owner.

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-VIII : FACILITIES TO BE PROVIDED BY THE OWNER/ BHEL

b)	The Contractor should make arrangements for storage of sufficient quantity of water required for work. The agency should also construct sumps (if required) of suitable size for storage of construction water as per their requirement for use in construction purposes.
c)	Contractor to satisfy himself that the water drawn by him is fit for construction / consumption and adequately treat such water at his cost when it is not found fit for the said purposes.

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-IX : DOCUMENTS / INFORMATION TO BE FURNISHED

09.00.00	DOCUMENTS / INFORMATION TO BE FURNISHED ALONGWITH TECHNICAL OFFER:
09.01.00	<p>Bidder shall furnish the following details in their technical offer:</p> <ul style="list-style-type: none"> • Electrical Load list/Feeder list with type/rating/power requirement. • Consumed power values and motor ratings of all the equipment. • Confirmation of scope in line with Tender. • Drawing/document submission schedule • Un-priced price schedule for supply & erection work mentioning “Quoted” against each item in BHEL • Price format. • List of recommended spare parts list.
09.02.00	<p>Bidder shall furnish the following details after placement of LOA.</p> <ul style="list-style-type: none"> • List of Self Manufacturing Items with indicating manufacturing place and Bought Out items. • Eligibility and Conformity of the facilities. • Sub Vendor proposed list by Bidder and Sub-vendors Qualification details with documentary proof. • List of Mechanical, Electrical, C&I, Civil and Structural items/equipment for Ash Handling System package for loading/unloading and storage.
09.03.00	<p>Other Drawing related information:</p> <ul style="list-style-type: none"> • The number of copies/prints/CD-ROMs/manuals to be furnished for various types of document is as per NIT specification and as finalised by BHEL after placement of order. • List of drawings shall be furnished immediately after placing the order (within 10 days). • All drawing and data sheet are to be submitted in standard sheets having approved title blocks. Customer’s, Customers’ Consultant’s and BHEL name has to be incorporated in all the drawings. • Drawing shall be complete. Incomplete drawing shall not be accepted. • All drawings submitted shall indicate the type, size, arrangement, weight of each component, breakdown for packing and shipping, the external connections, fixing arrangements required, the dimensions required for installation with other equipment and material, clearances required between various portions of the equipment and any other information that is relevant or requested for.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-IX : DOCUMENTS / INFORMATION TO BE FURNISHED

- The drawings mentioned for approval are to be submitted for approval. If drawings are approved with comments, then the same shall be resubmitted after incorporating the comments.
- Test certificates shall invariably consist of details such as Nameplate data, projects and BHEL & Customer's / Customer's consultant's name.
- Test certificates shall be strictly in A4 size.
- Records of test results / readings etc., made during internal testing shall be available during testing/ inspection in customer's presence.
- All drawings and test certificates etc., shall be marked as "CERTIFIED" and signed by the competent authority on the Bidder's side.
- Submission of O & M manuals, as built drawings/ doc. shall be in the Bidder's scope.
- Successful bidder has to submit AUTOCAD drawings along with pdf copies.
- All Flow diagrams, Equipment drawings, GA Drawings/Schemes shall be submitted with separate sheet indicating complete BOM. The same shall be reflected in BBU. BBU shall be furnished by the successful bidder after award of contract considering the BBU system-wise like Bottom Ash Removal system, Coarse ash removal system etc. Also, BBU shall indicate the amount towards Hardware, gaskets and miscellaneous items.
- Bidder shall submit Painting schedule for approval by customer and Painting for all equipment shall be as per approved painting schedule. All equipment shall be dispatched in painted condition.
- All items/equipment except pipes, structural steel, ash vessels and refractory shall be dispatched in transport- worthy and storage - worthy packing/shipment boxes. BBU No, Quantity, Item Description details shall be legibly marked on at least 2 sides of packing/shipment boxes. Loose items are not acceptable.
- Successful bidder shall furnish the detailed packing /shipment box details with information such as packing box size, type of packing, weight of each consignment, sequence no. of dispatch, no. of consignment for each deliverable item against each billing break up units/ billable blocks.
- Successful bidder shall submit "Storage Instructions" for the storage (at site) for the entire equipment in bidder's scope of supply within 4 weeks from the date of LOA and the bidder shall ensure that the Shipment list/ Packing list and Storage Instructions are available at site before the items/equipment reach the site.
- Successful bidder shall submit Field Quality Plan for Receipt & Storage within 4 weeks from the date of LOA.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-IX : DOCUMENTS / INFORMATION TO BE FURNISHED

- | | |
|--|--|
| | <ul style="list-style-type: none">• Successful bidder shall submit Field Quality Plan for Erection & Commissioning within 8 weeks from the date of LOA.• Bidder shall furnish Erection and Commissioning manpower requirement, consumables, tools and tackles requirement for commissioning of the system.• All Manuals shall be supplied in proper bound books or in folders.• Approval of documents does not absolve the contractor from his contractual obligations. |
|--|--|

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-X : TERMINAL POINTS

10.00.00	TERMINAL POINTS
10.01.00	The terminal points for the Dry Bottom Ash Handling System to be considered as follows:
10.02.00	Starting <ul style="list-style-type: none">i. Boiler furnace bottom – Seal plate assembly.ii. Eco Hopper’s outlet flange.iii. CTBD/Clarified water<ul style="list-style-type: none">a. CTBD/Clarified water header shall be provided 100 m far from Ash Conditioning Water Tank area of Unit#3. Subsequent valves (valve station) and piping shall be provided by the bidder.
10.03.00	Ending <ul style="list-style-type: none">i. Bottom ash unloading to open Truck through ash conditioner and canvas type chute - Receipt of bottom ash of (-) 25 mm on Truckii. For Bottom ash feeding to Bottom ash belt conveyor – Receipt of bottom ash of (-) 25 mm on Bottom ash belt conveyor.

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-XI : TOOLS AND TACKLES

11.00.00	TOOLS AND TACKLES
11.01.00	The bidder shall furnish a complete and new set of all tools and tackle which are necessary for erection, commissioning, maintenance and overhauling of any of the equipment/ system provided under this specification.
11.02.00	One set of all special tools and tackles including testing, calibrating and measuring instruments required for erection, assembly, disassembly and maintenance & testing of all equipment/systems for the package shall be supplied by the Bidder. The Bidder shall not use these special tools, tackles and testing/measuring equipment for erection/commissioning purposes and shall be new and in an unused condition, when they are handed over to the Owner.
11.03.00	Tools shall be shipped in separate containers clearly marked with the name of equipment for which they are intended.
11.04.00	The bidder shall furnish an unpriced list of such tools and tackle included under the scope of supply with the technical part of proposal along with price break up for review of end user/Consultant.
11.05.00	Supply of all tools and tackle are included under bidder's scope of work.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-XII : LIST OF ENCLOSURES

12.00.00

LIST OF ENCLOSURES:

Following enclosures are an integral part of this technical enquiry and must be signed and stamped and submitted along with the offer:

- End User (DVC) NIT Specification BIDDING DOCUMENT NO.: DVC/C&M/Engineering/KTPS(2X800MW)/EPC/IPHB including DVC GCC SCC and Site safety Plan and all Amendment & Clarification. (Documents listed below)
- Annexure - 1 Plot Plan
- Annexure - 2 Project Information
- Annexure - 3 DBA Flow Diagrams with Scope Demarcation
- Annexure - 4 -Void-
- Annexure - 5 List of Do's and Donts for AHP
- Annexure - 6 DVC NIT Specification
- Annexure - 7 DVC Clarification and Amendments
- Annexure - 8 Furnace Bottom Seal Plate assembly details
- Annexure - 9 Broad Scope Matrix
- Annexure - 10 Scope Matrix of Electrical And C&I
- Annexure - 11 Dry bottom ash handling system Attachment 3k DVC Format
- Annexure – 12 3D Model Submission
- Annexure – 13 -Void-
- Annexure – 14 Declaration of Site familiarization before bid submission
- Annexure – 15 Guaranteed Power Consumption
- Annexure-16 Guarantee Declaration Functional Guarantee
- Annexure-17 Billing Break-Up format for Supply
- Annexure-18 Sub- Vendor List with Quality Assurance program requirement
- Annexure-19 -VOID-

TECHNICAL CONDITIONS OF CONTRACT (TCC) CHAPTER-XII : LIST OF ENCLOSURES

- Annexure-20 Sub-vendor questionnaire & contractor's proposal cum evaluation report
- Annexure-21 -VOID-
- Annexure-22 BHEL's HSE Manual & PPE Manual
- Annexure-23 BATTERIES (MANAGEMENT & HANDLING) RULES-2001, BATTERIES (MANAGEMENT AND HANDLING) AMENDMENT RULES-2010 and E- WASTE (MANAGEMENT) AMENDMENT RULES, 2018
- Annexure- 24 General Layout of Sheds at Worker's Establishment
- Annexure- 25 Standard guidelines for labour colony or worker accommodation.
- Annexure- 26 Typical layout for workmen shed
- Annexure- 27- Declaration for provenness
- Annexure- 27-A- DECLARATION REGARDING SOURCING OF THE SYSTEMS RELATED TO COMPLETION OF THE ASH HANDLING SYSTEM OF 2X800 MW KODERMA PROJECT
- Annexure- 28 Price Break-Up format
- Annexure- 29-Performa for Supplies from MSE
- Annexure-30- KODERMA 2 X 800 MW STPP-GEO INV REPORT-R02
- Annexure-31- DRAWING LIST
- Annexure-32- Boiler structural GA Drawing of +18M EL
- Annexure-33- TECHNICAL CLARIFICATIONS
- Annexure -34- Bottom Ash Intermediate Silo
- Annexure-35- Koderma - Updated Layout of Dry Bottom Ash Area
- APPENDIX 2 PRICE VARIATION CLAUSE
- APPENDIX 3 INSURANCE REQUIREMENT
- **Note: Bidder shall download above documents and declaration shall be submitted to BHEL for confirming that bidder has gone through all technical specification, amendment &**

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-XII : LIST OF ENCLOSURES

clarification of end user and BHEL along with list of annexures mentioned in SECTION-13 of technical enquiry specification issued with this tender.

NOTE: BHEL specification has to be read in conjunction with the DVC NIT specification, clarifications & Amendments (As per Annexure-6&7) along with all other annexures listed above.

Declaration has to be submitted by bidder to BHEL that they have gone through all technical specification, amendments & clarifications of DVC as well as BHEL's along with all other annexures enclosed as part of technical enquiry specification issued with this tender.

In the event of any conflict or ambiguity between the specifications for any particular equipment, system, design criteria, in the standard &/or specification, &/or interpretation of clauses in this enquiry specification &/or its various annexures, the more significant and stringent of the two requirements shall prevail and the decision of BHEL shall be final & binding, which bidder has to adhere to the same without any additional cost & time implication whatsoever to BHEL. Any other interpretation of the contrast clauses (If any) in the specification & its annexures, derived by bidder shall be brought for the discussion during pre-bid stage only and once the contract is awarded, any other interpretation shall not be entertained, which are not in line with the intent of the specification/BHEL's interpretation.

12.01.00

Bidder to refer the following list of End User (DVC) NIT Specification BIDDING DOCUMENT NO.: DVC/C&M/Engineering/ KTPS(2X800MW)/EPC/IPHB including DVC GCC SCC and Site safety Plan and all Amendment & Clarification.

AMENDMENTS/CLARIFICATION ISSUED BY DVC		
Sl. No.	Amendment Name	Pages
1	Corrigendum No. 1, Bidding Schedule	01
2	Corrigendum No. 2, Tech Spec-Section-VI, Part-A	03
3	Corrigendum No. 3, Comm Amdt-01 with revised Form-20	114
4	Corrigendum No. 5, Revised Bidding Schedule	01
5	Corrigendum No. 6, Revised Bidding Schedule	01
6	Corrigendum No. 7, Comm Amdt-02 & Clarification-01	163
7	Corrigendum No. 8, Revised Bidding Schedule	01
8	Corrigendum No. 9, Amdt No. 1, Tech Specification	29
9	Existing Plant Drain Layout & its Section	02

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-XII : LIST OF ENCLOSURES

10	Corrigendum No. 10, Clarification & Technical Amdt No. 2	217
11	Corrigendum No. 11, Revised Bidding Schedule	01
12	Corrigendum No. 12, Amdt No.3, Tech Specification	54
13	Corrigendum No. 13, Amdt No. 4, Tech Specification	151
14	Corrigendum No. 14, Amdt No. 5, Tech Specification	183
15	Corrigendum No. 15, Technical Pre-Bid Clarification	12
16	Corrigendum No. 16, Amdt No. 6, Tech Specification	02
17	Corrigendum No. 17, Comm Amdt-03 & Clarification-02	149
18	Corrigendum No. 19, Commercial Amdt -04	08
19	Corrigendum No. 20, Amdt No. 7 to 11, Tech Specification	25
20	Corrigendum No. 21, Amdt No. 12 & 13, Tech Specification	08
21	Corrigendum No. 22, Amdt No. 14, Tech Specification	03
22	Corrigendum No. 23, Commercial Amdt -05	42
23	Corrigendum No. 24, Revised Bidding Schedule	01
24	Corrigendum No. 25, Amdt No. 15 & 16, Tech Specification	07
25	Corrigendum No. 26, Amdt No. 17, Tech Specification	02
26	Corrigendum No. 27, Revised Bidding Schedule	01
27	Corrigendum No. 28, Amdt No. 18, Tech Specification	05
28	Corrigendum No. 29, Comm Amdt-06 & Clarification-03	17
29	Corrigendum No. 32, Amdt No. 19, Tech Specification	03
30	Corrigendum No. 33, Amdt No. 20, Tech Specification	02
31	Corrigendum No. 35, Amdt No. 21, Tech Specification	03
32	Corrigendum No. 37, Amdt No. 22, Tech Specification	84
33	Corrigendum No. 38, Amdt No. 23, Tech Specification	08
34	Corrigendum No. 39, Comm Amdt-07	16
35	Corrigendum No. 40, Comm Amdt-08	02
36	Corrigendum No. 41, Amdt No. 24, Tech Specification	131
37	Technical Amendment, Scope Change (Annexure-I)	47
38	Technical Amendment, Revised Sub Section-IIA-16 (Annexure-II)	133
39	Technical Amendment (Annexure-III, Revised SLD for 400 KV Switchyard)	02
40	Amendment no 1 of Change Proposal	06
41	Clarification -1 of Change Proposal	06
42	Revised Flow Diagram of Bottom Ash, Coarse Ash & HCSD System	02
43	Amendment No 2 to bid specification	02
44	Amendment No 3 to bid specification	27
45	Amendment No 4 to bid specification	03
46	Amendment No 5 to bid specification	02
47	Amendment No 6 to bid specification	10
48	Amendment No 7 to bid specification	02

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-XII : LIST OF ENCLOSURES

49	Amendment No 8 to bid specification	02
	Total Nos. of Pages	1696
MAIN SPECIFICATIONS ISSUED BY DVC		
1	Section I-V & VII	2077
2	PART-A	986
3	PART-B BOOK 1 OF 5 (MECH)	1087
4	PART-B BOOK 2 OF 5 (ELECT)	364
5	PART-B (C&I)	175
6	PART-B BOOK 4 OF 5 (CIVIL)	274
7	PART-B BOOK 5 OF 5 (QA)	404
8	PART-C	134
9	PART-D	71
10	PART-E Part 1	9
11	PART-E Part 2	9
12	PART-E Part 3	60
13	PART-E Part 4	209
14	PART-E Part 5-Cnl_1	39
15	PART-E Part 5-Cnl_2	31
16	PART-E Part 5-Cnl_3	8
	Total Nos. of Pages	5937

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER-XIII :TIME SCHEDULE

13.00.00	Time Schedule																														
13.01.00	After the issuance of the LOA for the EPC PACKAGE FOR DRY BOTTOM ASH HANDLING SYSTEM, the total work shall be completed` within 31 months.																														
13.02.00	The time for completion shall be reckoned from the Date of Issuance of LOA.																														
13.03.00	Time being the essence of the contract, the entire work shall be completed by the contractor within the time schedule																														
13.04.00	VOID																														
13.05.00	<p>Schedule of important Activities:</p> <p>Time being the essence of the contract, the entire work shall be completed by the contractor within the time schedule so that the overall project milestones can be achieved</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">SL No</th> <th style="width: 55%;">Description</th> <th style="width: 20%;">Unit # 1 (months from LOA)</th> <th style="width: 15%;">Unit # 2 (months from LOA)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Basic Engineering</td> <td style="text-align: center;">2</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Detailed Engineering</td> <td style="text-align: center;">10</td> <td style="text-align: center;">10</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Dispatch and Completion of the Supplies</td> <td style="text-align: center;">20</td> <td style="text-align: center;">24</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Readiness of Bottom Ash Hopper for Boiler Light Up</td> <td style="text-align: center;">21</td> <td style="text-align: center;">25</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Erection and Commissioning Completion</td> <td style="text-align: center;">22</td> <td style="text-align: center;">26</td> </tr> <tr> <td style="text-align: center;">6</td> <td>Completion of Facilities</td> <td style="text-align: center;">27</td> <td style="text-align: center;">31</td> </tr> </tbody> </table>			SL No	Description	Unit # 1 (months from LOA)	Unit # 2 (months from LOA)	1	Basic Engineering	2	2	2	Detailed Engineering	10	10	3	Dispatch and Completion of the Supplies	20	24	4	Readiness of Bottom Ash Hopper for Boiler Light Up	21	25	5	Erection and Commissioning Completion	22	26	6	Completion of Facilities	27	31
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6	Completion of Facilities	27	31																												
13.06.00	<p>Major Civil Input Drawings schedule after LOA: -</p> <p>Following AHP facilities are broadly listed for which civil input drawings are to be prioritized for submission and approval to facilitate execution at site. Bidder shall take immediate action in this regard to meet the below listed timeline for submission of civil input drawings/documents.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">SI No</th> <th style="width: 50%;">Drawing Title</th> <th style="width: 35%;">Drg Submission Schedule after LOA (In Days)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			SI No	Drawing Title	Drg Submission Schedule after LOA (In Days)																									
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TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-XIII :TIME SCHEDULE

	1.	Sizing of Bottom Ash Hopper	15
	2.	Sizing of BAIM Silo	15
	3.	GA of Bottom Ash Hopper	30
	4.	Dry Bottom Ash System Layout	30
	5.	GA of Transfer Tower cum Crusher House	45
	6.	GA of Dry Bottom Ash Conveyor-1	45
	7.	GA of Dry Bottom Ash Conveyor-2	45
	8.	GA of BAIM Silo	60
	9.	GA of Ash Conditioning Water Tank and Water Pump Area	60
13.07.00	<p>Bidder to prepare a L2 schedule and submit it to BHEL for review and approval within One Month. In this L2 schedule, Bidder to indicate following milestone activities along with detailed micro level planning and ensure that the schedule is within the overall time period as indicated in the CTC and ensure all resources are mobilized accordingly.</p> <ol style="list-style-type: none"> 1) Completion of basic engineering 2) Completion of engineering of all civil assignment/Civil drawings along with 3D modeling drawings 3) Completion of detail engineering along with 3D modeling drawings 4) Completion of bought out items (BOI) ordering - (Un-priced PO to be submitted to BHEL) 5) Completion of detail engineering of BOI items 6) Completion of construction of temporary open & closed storage shed and Bidder's office 7) Start of dispatches 8) Completion of Main supply dispatches 9) Completion of Mandatory & Commissioning spares dispatches 10) Start of erection 11) Completion of erection 12) Completion of Commissioning and No-load equipment trial 13) Readiness of System /Equipment / Machines 		

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-XIII :TIME SCHEDULE

13.08.00	<p>Inputs exchange between the EPC vendor and BHEL in line with the scope defined in the relevant annexures shall be progressive.</p> <p>Detailed L3 Schedule, including inputs requirement dates from BHEL, shall be prepared and submitted by Vendor for approval of BHEL.</p> <p>To meet above schedule in general, and any other intermediate targets set, to meet customer/project schedule requirements, vendor shall arrange & augment all necessary resources from time to time on the instructions of BHEL.</p>
13.09.00	<p>Guarantee/ Warrantee/ Defect Liability period</p> <p>The Contractor warrants that the Facilities or any part thereof shall be free from defects in the design, engineering, materials and workmanship of the Plant and Equipment supplied and of the work executed.</p> <p>The Guarantee/ warrantee/ defect liability Period shall be “Eighteen (18) months from the date of Completion of the Facilities (or any part thereof) or twelve (12) months from the date of Operational Acceptance of the Facilities (or any part thereof), whichever first occurs”, unless specified otherwise in the TCC.</p> <p>If during the Defect Liability Period any defect should be found in the design, engineering, materials and workmanship of the Plant and Equipment supplied or of the work executed by the Contractor, the Contractor shall promptly, in consultation and agreement with the Owner/End User’s Consultant/BHEL regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good (as the Contractor shall, at its discretion, determine) such defect as well as any damage to the Facilities caused by such defect. The Contractor shall not be responsible for the repair, replacement or making good of any defect or of any damage to the Facilities arising out of or resulting from any of the following causes:</p> <ul style="list-style-type: none">(a) improper operation or maintenance of the Facilities by the Owner.(b) operation of the Facilities outside specifications provided in the Contract.(c) normal wear and tear.

TECHNICAL CONDITIONS OF CONTRACT (TCC) CHAPTER-XIII :TIME SCHEDULE

The Contractor's obligations under the above clause shall not apply to

- (a) any materials that are supplied by the BHEL under (BHEL-Supplied Plant, Equipment and Materials), are normally consumed in operation, or have a normal
- (b) any designs, specifications or other data designed, supplied or specified by or on behalf of the Owner or any matters for which the Contractor has disclaimed responsibility herein.

Owner/BHEL shall give the Contractor a notice stating the nature of any such defect together with all available evidence thereof, promptly following the discovery thereof.

The Contractor may, with the consent of the Owner/BHEL, remove from the Site any Plant and Equipment or any part of the Facilities that are defective if the nature of the defect, and/or any damage to the Facilities caused by the defect, is such that repairs cannot be expeditiously carried out at the Site.

If the repair, replacement or making good is of such a character that it may affect the efficiency of the Facilities or any part thereof, the Owner/BHEL may give to the Contractor a notice requiring that tests of the defective part of the Facilities shall be made by the Contractor immediately upon completion of such remedial work, whereupon the Contractor shall carry out such tests.

If such part fails the tests, the Contractor shall carry out further repair, replacement or making good (as the case may be) until that part of the Facilities passes such tests. The tests in character shall in any case be not less than what has already been agreed by the Owner/ End user/ End-User's consultant and the Contractor for the original equipment/part of the Facilities.

TECHNICAL CONDITIONS OF CONTRACT (TCC) CHAPTER-XIII :TIME SCHEDULE

If the Contractor fails to commence the work necessary to remedy such defect or any damage to the Facilities caused by such defect within a reasonable time (which shall in no event be considered to be less than fifteen (15) days), BHEL may, following notice to the Contractor, proceed to do such work, and the reasonable costs incurred by the BHEL in connection therewith shall be deducted by the BHEL from any monies due to the Contractor or claimed under the Performance Security.

If the Facilities or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the Facilities or such part, as the case may be, shall be extended by a period equal to the period during which the Facilities or such part cannot be used by the Owner because of any of the aforesaid reasons. Upon correction of the defects in the Facilities or any part thereof by repair/replacement, such repair/replacement shall have the Defect Liability Period extended by a period of twelve (12) month from the time such replacement/repair of the Facilities or any part thereof.

All guarantee/ warranty/ Defects Liability and Latent Defects Liability are by the Successful bidder.

“Facilities” means the Plant and Equipment to be supplied and installed, as well as all the Installation Services to be carried out by the Contractor for the Tendered scope/ Package.

“Completion” means that the Facilities have been completed operationally and structurally and put in a tight and clean condition, and that all work in respect of Pre-commissioning of the Facilities has been completed; and Commissioning has been attained as per Technical Specifications.

“Pre-commissioning” means the testing, checking and other requirements specified in the Technical Specifications that are to be carried out by the Contractor in preparation for Commissioning.

“Commissioning” means operation of the Facilities by the Contractor; which operation is to be carried out by the Contractor for the purpose of carrying out Guarantee Test(s).

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER-XIII :TIME SCHEDULE

	<p>“Operational Acceptance” means the acceptance by the Purchaser/ Employer of the Facilities, which certifies the Contractor’s fulfilment of the Contract in respect of Functional Guarantees of the Facilities.</p> <p>Operational Acceptance shall occur in respect of the Facilities when the Guarantee Test has been successfully completed and the Functional Guarantees are met.</p>
13.10.00	<p>Latent defects Liability</p> <p>At the end of the Defect Liability Period, the contractor liability ceases except for latent defects. The contractor's liability for latent defects warranty shall be limited to a period of five (5) years from the end of Defect Liability Period. For the purpose of this clause, the latent defects shall be the defects inherently lying within the material or arising out of design deficiency which do not manifest themselves during the Defect Liability Period, but later.</p> <p>In case, there is any dispute between regarding latent defects, a third party as mutually agreed upon by the Owner, BHEL and the Contractor shall be engaged by the Owner/End-User/End user’s consultant for settling the dispute.</p> <p>The third party, so engaged by the Owner/End-User/End user’s consultant, shall be paid fee plus reasonable expenditures incurred in the execution of its duties as mentioned above. In case of latent defect being proved, such costs shall be recoverable from the Contractor and the Contractor shall bear and reimburse such costs to the Owner/End-User/End user’s consultant. If the dispute regarding latent defects cannot be settled as above, then the dispute shall be settled as per provision of contract.</p>

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14.00.00	TAXES & DUTIES
14.01.00	<p>The contractor shall pay all (save the specific exclusions as enumerated in this clause) taxes, fees, license, charges, deposits, duties, tools, royalty, commissions, other charges, etc. which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes/duties, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit.</p> <p>However, provisions regarding GST on output supply (goods/service) and TDS/TCS as per Income Tax Act shall be as per following clauses.</p>
14.02.00	GST (Goods and Services Tax)
14.02.01	<p>GST as applicable on output supply (goods/services) are excluded from contractor's scope; therefore, contractor's price/rates shall be exclusive of GST. Reimbursement of GST is subject to compliance of following terms and conditions. BHEL shall have the right to deny payment of GST and to recover any loss to BHEL on account of tax, interest, penalty etc. for non-compliance of any of the following condition.</p>
14.02.02	<p>The admissibility of GST, taxes and duties referred in this chapter or elsewhere in the contract shall be limited to direct transactions between BHEL & its Contractor. BHEL shall not consider GST on any transaction other than the direct transaction between BHEL & its Contractor.</p>
14.02.03	<p>Contractor shall obtain prior written consent of BHEL before billing the amount towards such taxes. Where the GST laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL shall have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor.</p>
14.02.04	<p>Contractor has to submit GST registration certificate of the concerned state. Contractor also needs to ensure that the submitted GST registration certificate should be in active status during the entire contract period.</p>

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14.02.05	Contractor/Vendor has to issue Invoice/Debit Note/Credit Note indicating HSN/SAC code, Description, Value, Rate, applicable tax and other particulars in compliance with the provisions of relevant GST Act and Rules made thereunder.
14.02.06	Vendor has to submit GST compliant invoice within the due date of invoice as per GST Law. In case of delay, BHEL reserves the right of denial of GST payment if there occurs any hardship to BHEL in claiming the input thereof. In case of goods, vendor has to provide scan copy of invoice & GR/LR/RR to BHEL before movement of goods starts to enable BHEL to meet its GST related compliances. Special care should be taken in case of month end transactions.
14.02.07	Vendor has to ensure that invoice in respect of such services which have been provided/completed on or before end of the month should not bear the date later than last working day of the month in which services are performed.
14.02.08	<p>Subject to other provisions of the contract, GST amount claimed in the invoice shall be released on fulfilment of all the following conditions by the Contractor: -</p> <ul style="list-style-type: none">a. Supply of goods and/or services have been received by BHEL.b. Original Tax Invoice has been submitted to BHEL.c. Contractor/ Vendor has submitted all the documents required for processing of bill as per contract/ purchase order/ work order.d. In cases where e-invoicing provision is applicable, vendor/contractor is required to submit invoice in compliance with e-invoicing provisions of GST Act and Rules made thereunder.e. Contractor has filed all the relevant GST return (e.g. GSTR-1, GSTR-3B, etc.) pertaining to the invoice submitted and submit the proof of such return along with immediate subsequent invoice. In case of final invoice/ bill, contractor has to submit proof of such return within fifteen days from the due date of relevant return.f. Respective invoice has appeared in BHEL's GSTR - 2A for the month corresponding to the month of invoice and in GSTR-2B of the month in which such invoices has been

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	<p>reported by the contractor along with status of ITC availability as “YES” in GSTR-2B. Alternatively, BG of appropriate value may be furnished which shall be valid at least one month beyond the due date of confirmation of relevant payment of GST on GSTN portal or sufficient security is available to adjust the financial impact in case of any default by the contractor.</p> <p>g. Contractor has to submit an undertaking confirming the payment of all due GST in respect of invoices pertaining to BHEL.</p>
14.02.09	Any financial loss arises to BHEL on account of failure or delay in submission of any document as per contract/purchase order/work order at the time of submission of Tax invoice to BHEL, shall be deducted from contractor’s bill or otherwise as deemed fit.
14.02.10	TDS as applicable under GST law shall be deducted from contractor’s bill.
14.02.11	Contractor shall comply with the provisions of e-way bill wherever applicable. Further wherever provisions of GST Act permit, all the e-way bills, road permits etc. required for transportation of goods needs to be arranged by the contractor.
14.02.12	Contractor shall be solely responsible for discharging his GST liability according to the provisions of GST Law and BHEL will not entertain any claim of GST/interest/penalty or any other liability on account of failure of contractor in complying the provisions of GST Law or discharging the GST liability in a manner laid down thereunder.
14.02.13	In case declaration of any invoice is delayed by the vendor in his GST return or any invoice is subsequently amended/alterd/deleted on GSTN portal which results in any adverse financial implication on BHEL, the financial impact thereof including interest/penalty shall be recovered from the Contactor’s due payment.
14.02.14	Any denial of input credit to BHEL or arising of any tax liability on BHEL due to non-compliance of GST Law by the Contractor in any manner, will be recovered along with liability on account of interest and penalty (if any) from the payments due to the Contactor.

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14.02.15	In the event of any ambiguity in GST law with respect to availability of input credit of GST charged on the invoice raised by the contractor or with respect to any other matter having impact on BHEL, BHEL's decision shall be final and binding on the contractor.
14.02.16	<p><u>Variation in Taxes & Duties:</u></p> <p>Any upward variation in GST shall be considered for reimbursement provided supply of goods and services are made within schedule date stipulated in the contract or approved extended schedule for the reason solely attributable to BHEL. However downward variation shall be subject to adjustment as per actual GST applicability.</p> <p>In case the Government imposes any new levy/tax on the output service/goods after price bid opening, the same shall be reimbursed by BHEL at actual. The reimbursement under this clause is restricted to the direct transaction between BHEL and its contractor only and within the contractual delivery period only.</p> <p>In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer but before opening of the price Bid, the Bidder/Contractor must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of price bid. Claim for any such impact after opening the price bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.</p>
14.03.00	<p><u>Income Tax:</u></p> <p>TDS/TCS as applicable under Income Tax Act, 1961 or rules made thereunder shall be deducted/collected from contractor's bill.</p>
14.04.00	<p><u>BOCW Act & Cess Act</u></p> <p>1. For Supply contract: BOCW Cess is not to be borne by contractor. 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.</p>

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	<p>2. For Services contract excluding Civil Works and Site fabricated structure: BOCW Cess is not to be borne by contractor. 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.</p> <p>3. For Services contract for Civil Works and Site fabricated structure: BOCW Cess is to be borne by contractor and the quoted price shall be inclusive of BOCW cess. BHEL shall not 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. Also, BHEL shall not reimburse the Fee paid towards the registration of establishment, fees paid towards registration of Beneficiaries and Contribution of Beneficiaries remitted</p> <p><u>Bidder may please note that the sub-contractor/bidder of BHEL engaging building or construction worker in connection with building or other construction work, are required to follow the procedures enumerated below:</u></p>
14.04.01	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.
14.04.02	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.
14.04.03	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.
14.04.04	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

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	approval from the Construction Manager.
14.04.05	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 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.
14.04.06	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.
14.04.07	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.
14.04.08	It shall be the responsibility of the sub-contractor as employer to make payment/deposit of applicable cess amount on the extent of work involving building or construction workers engaged by the sub-contractor within a period of one month from the receipt of payment. It shall also 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: <ul style="list-style-type: none">a. Number of Building Workers employed during preceding one month.b. Number of Building workers registered as Beneficiary during preceding one month.c. Disbursement of Wages made to the Building Workers for preceding wage month.a. Remittance of Contribution of Beneficiaries made during the preceding month.
14.04.09	BOCW remittance should be made only after obtaining prior consent from BHEL. Contractor shall make remittance of the BOCW Cess as per the Act in consultation with BHEL as per the rates in force.

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14.04.10	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.
14.04.11	If at 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 deduct the applicable cess (on the contract value and penalty (if any, imposed by Cess Authorities) from the payables on account of non-compliance.
14.04.12	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.

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15.00.00	PAYMENT TERMS-
15.01.00	For Plant and Equipments (excluding Mandatory Spares and Type Tests) -Ex-works SUPPLY <i>Payment will be released within 45 days for Micro and Small Enterprises (MSEs), within 60 days for Medium Enterprises, within 90 days for Non-MSME vendors) after submission of complete set of valid documents, as specified under respective payment terms.</i>
15.01.01	<p>a) Three Percent (3%) of Total Ex-Works Supply Price Component of Supply of Plant & equipment against submission of basic/ detail Engineering drawings/ documents on pro rata basis against submission of equivalent amount of Bank Guarantee as per BHEL format. The pro rata payment shall be as per the list of drawings enclosed under Annexure-31 to Technical Specifications of the tender and the weightage against each drawing/ document thereon shall be finalized subsequently after award of Contract.</p> <p>b) Two Percent (2%) of Total Ex-Works Supply Price Component of Supply of Plant & equipment against customer approval (CAT-I) of basic/ detail Engineering drawings/ documents on pro rata basis against submission of equivalent amount of Bank Guarantee as per BHEL format. The pro rata payment shall be as per the list of drawings enclosed under Annexure-31 to Technical Specifications of the tender and the weightage against each drawing/ document thereon shall be finalized subsequently after award of Contract.</p>
15.01.02	<p>a) Three Percent (3%) of Total Ex-Works Supply Price Component of Supply of Plant & equipment on Submission of copy of purchase order placed by Contractor and duly accepted by Sub-Contractor(s) for Dry Bottom Ash Crusher against submission of equivalent amount of Bank Guarantee as per BHEL format.</p> <p>b) Two Percent (2%) of Total Ex-Works Supply Price Component of Supply of plant & equipment on Submission of copy of purchase order placed by Contractor and duly accepted by Sub-Contractor(s) for Belt/Chain Conveyor. against submission of equivalent amount of Bank Guarantee as per BHEL format.</p>

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	<p>c) Three Percent (3%) of Total Ex-Works Supply Price Component of Supply of plant & equipment on Site Mobilisation and completion of storage facilities at site as per the certification of Construction Manager against submission of equivalent amount of Bank Guarantee as per BHEL format.</p> <p>d) Two Percent (2%) of Total Ex-Works Supply Price Component of plant & equipment on Finalisation of Erection agency, i.e., Submission of copy of purchase order placed by Contractor and duly accepted by Sub-Contractor(s) for Erection agency against submission of equivalent amount of Bank Guarantee as per BHEL format.</p>
15.01.03	<p>Sixty (60%) of Total Ex-Works Supply Price Component of the Contract Price for each identified equipment upon dispatch of equipment from manufacturer's works on pro-rata basis on production of invoices and satisfactory evidence of shipment (which shall be original Goods Receipt or receipted GR/Rail receipt) including Material Dispatch Clearance Certificate (MDCC). Following documents to be submitted by vendor:</p> <p>FOR DISPATCH INTIMATION / RECOGNITION OF DISPATCH</p> <ul style="list-style-type: none">a) Legible scanned copy of the following documents by e-mail immediately on dispatch for dispatch intimation.b) GST compliant invoicec) LR / Courier receipt / RR (indicating Invoice No., no. of boxes, PTL (if applicable) etc.) and Bill of Lading or AWB for imported itemsd) Packing List: Must indicate No. of boxes/bundles/packages, Packing size, Gross weight and net weight of each package, Contents of the package with cross reference to BBU item no. or item serial no. and Quantity of each item separatelye) Submission of documentary evidence by the Contractor towards having taken the insurance policy(ies.) in terms of relevant provisions of and acceptance of same by the OWNER/BHEL.f) Dispatch Clearance.g) E-way bill, as may be applicableh) COO - Certificate of Origin (For imported items)

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	<p>i) Packing List: Must be indicating No. of boxes, Packing size, Gross weight and net weight of each package, Contents of the package with cross reference to BoM item code no. or item serial no. and Quantity of each item separately</p> <p>j) Duty drawback (if applicable) documents: As per applicable law</p> <p>Note: - Above list is tentative in nature and will be finalised at the time of PO.</p> <p>Note:</p> <p>i. BHEL may require certain original (physical) dispatch documents for billing to BHEL's customer. Such original documents, as insisted by BHEL, shall be submitted to BHEL in original within 7 days from the date of removal of goods/ generation of the document, whichever is earlier.</p> <p>ii. BHEL may insist on using online dispatch intimation/ document submission/ data entry system during execution of the order/ contract. BHEL may also insist on preparation of certain documents/ details in specific formats. The seller/ contractor shall comply with the same.</p>
15.01.04	<p>Fifteen (15%) of Total Ex-Works Supply Price Component of the Contract Price for each identified equipment will be released on pro-rata basis against Material Receipt Certificate (MRC) / Store Receipt Voucher (SRV) issued by owner/customer/ BHEL upon physical verification and on submission of complete set of valid documents, Invoice</p> <p>Documents to be submitted by vendor:</p> <p>a) LR / Courier receipt / RR (indicating Invoice No., no. of boxes, PTL (if applicable) etc.) (For indigenous supplies)</p> <p>b) Bill of Lading or Air Way Bill (For imported items)</p> <p>c) COO - Certificate of Origin (For imported items)</p> <p>d) Packing List: Must be indicating No. of boxes, Packing size, Gross weight and net weight of each package, Contents of the package with cross reference to BoM item code no. or item serial no. and Quantity of each item separately</p> <p>e) Duty drawback (if applicable) documents: As per applicable law</p> <p>f) E-way bill as may be applicable.</p>

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	<p>g) On furnishing the confirmation from the contractor that all the payments due w.r.t. the Bought out Items are paid to their Sub-vendor(s) as per the agreed payment terms between Contractor and their sub-vendor.</p> <p>Collection of Material Receipt Certificate from Site/ Owner and its submission for claiming the payment shall be the responsibility of the Seller/ Contractor.</p>
15.01.05	Two Percent (2%) of Ex-Works Supply Price Component of the contract price on Successful Completion of Trial/Initial Operation including all associated auxiliaries and ancillary works for Unit-3 and certification by the owner/customer/ BHEL.
15.01.06	Two Percent (2%) of Ex-Works Supply Price Component of the contract price on Successful Completion of applicable Performance Guarantee Tests for Unit-3, to be conducted along with Trial/Initial operation as specified in Technical Specifications and issuance of Completion Certificate for Unit-3 and certification by owner/customer/ BHEL.
15.01.07	One Percent (1%) of Ex-Works Supply Price Component of the contract price on successful completion of applicable Performance Guarantee Tests to be conducted after Trial/Initial operations as specified in Technical Specifications and issue of Operational Acceptance Certificate for Unit-3. However, if for reasons not attributable to contractor, in case the performance Guarantee (PG) Test of the Facilities or the relevant part thereof to be conducted after Trial/Initial operations cannot be successfully completed within the period of one year from the due date of completion of such PG test(s), then aforesaid 1% amount shall be released upon submission of Bank Guarantee of equivalent value. Such BG shall be released after successful conductance of PG test.
15.01.08	Two Percent (2%) of Ex-Works Supply Price Component of the contract price on Successful Completion of Trial/Initial Operation including all associated auxiliaries and ancillary works for Unit-4 and certification by the owner/customer/ BHEL.
15.01.09	Two Percent (2%) of Ex-Works Supply Price Component of the contract price on Successful Completion of applicable Performance Guarantee Tests for Unit-4, to be conducted along with Trial/Initial operation as specified in Technical Specifications and issuance of Completion Certificate for Unit-4 by the owner/customer/ BHEL.
15.01.10	One Percent (1%) of Ex-Works Supply Price Component of the contract price on successful completion of applicable Performance Guarantee Tests to be conducted after Trial/Initial

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	<p>operations as specified in Technical Specifications and issue of Operational Acceptance Certificate for Unit-4. However, if for reasons not attributable to Bidder, in case the performance Guarantee (PG) Test of the Facilities or the relevant part thereof to be conducted after Trial/Initial operations cannot be successfully completed within the period of one year from the due date of completion of such PG test(s), then aforesaid 1% amount shall be released upon submission of Bank Guarantee of equivalent value. Such BG shall be released after successful conductance of PG test.</p>
15.01.11	<p>Notes:</p> <ol style="list-style-type: none">1. Full Load is achieving full rated load generation on designated fuel as per the definition of Commissioning, for the purpose of capacity addition.2. The Initial Operation of the complete Facilities as an integral unit shall be conducted as per clause end user's i.e DVC tender document ref: Section-VI (Technical Specifications). Cl 6.02.00 of Part-C (GTR),3. The basis for the pro-rata payments at S. No. 16.01.01 & 16.01.02 above shall be the Billing Break-up (BBU) to be finalized subsequently after award of Contract. The Billing Break Up shall be generally on item rate basis. However, for the items which are generally supplied and billed on weight (tonnage) basis, the Billing Break-Up may be considered on weight (tonnage) basis.4. In case Installation Price (excluding Civil and Site Fabricated Structural works price) is less than 10 % of Total Contract Value, the amount by which it is lower shall be retained proportionately from the Ex-works component of Contract price while releasing payments due on receipt of equipment, and no interest shall be payable on the retained amount. The aforesaid retained amount shall be paid on pro-rata basis upon completion of installation of the respective equipment and its certification by the project manager of Owner/BHEL.
15.02.00	<p>For Mandatory Spares Payment</p> <p><i>Payment will be released within 45 days for Micro and Small Enterprises (MSEs), within 60 days for Medium Enterprises, within 90 days for Non-MSME vendors) after submission of complete set of valid documents, as specified under respective payment terms.</i></p>

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15.02.01	<p>Seventy five percent (75%) of price component of the Mandatory spares to be paid on pro-rata basis: upon despatch to site and against invoices and shipping documents along with Material Despatch Clearance Certificate (MDCC) issued by of owner/customer/ BHEL.</p> <p>Documents to be submitted by vendor:</p> <p>FOR DISPATCH INTIMATION / RECOGNITION OF DISPATCH</p> <ul style="list-style-type: none">a) legible scanned copy of the following documents by e-mail immediately on dispatch for dispatch intimationb) GST compliant invoicec) LR / Courier receipt / RR (indicating Invoice No., no. of boxes, PTL (if applicable) etc.) and Bill of Lading or AWB for imported itemsd) Packing List: Must indicate No. of boxes/bundles/packages, Packing size, Gross weight and net weight of each package, Contents of the package with cross reference to BBU item no. or item serial no. and Quantity of each item separatelye) Submission of documentary evidence by the Contractor towards having taken the insurance policy(ies.) in terms of relevant provisions of and acceptance of same by the OWNER/BHEL.f) Dispatch Clearance.g) E-way bill, as may be applicableh) COO - Certificate of Origin (For imported items)i) Packing List: Must be indicating No. of boxes, Packing size, Gross weight and net weight of each package, Contents of the package with cross reference to BoM item code no. or item serial no. and Quantity of each item separatelyj) Duty drawback (if applicable) documents: As per applicable law <p>Note: - <i>Above list is tentative in nature and will be finalised at the time of PO.</i></p> <ul style="list-style-type: none">k) BHEL may require certain original (physical) dispatch documents for billing to BHEL's customer. Such original documents, as insisted by BHEL, shall be submitted to BHEL in
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	<p>original within 7 days from the date of removal of goods/ generation of the document, whichever is earlier.</p> <p>l) BHEL may insist on using online dispatch intimation/ document submission/ data entry system during execution of the order/ contract. BHEL may also insist on preparation of certain documents/ details in specific formats. The seller/ contractor shall comply with the same.</p>
15.02.02	<p>Twenty five percent (25%) of price component of the Mandatory spares price component of the spares to be paid on pro-rata basis: on receipt and storage at site on certification by the project manager of owner/customer/ BHEL upon physical verification for the spares received and stored at site.</p> <p>Documents to be submitted by vendor:</p> <ul style="list-style-type: none"> a) Invoice b) LR / Courier receipt / RR (indicating Invoice No., no. of boxes, PTL (if applicable) etc.) (For indigenous supplies) c) Bill of Lading or Air Way Bill (For imported items) d) COO - Certificate of Origin (For imported items) e) Packing List: Must be indicating No. of boxes, Packing size, Gross weight and net weight of each package, Contents of the package with cross reference to BoM item code no. or item serial no. and Quantity of each item separately f) Duty drawback (if applicable) documents: As per applicable law g) E-way bill as may be applicable. h) On furnishing the confirmation from the contractor that all the payments due w.r.t. the Bought-out Items are paid to their Sub-vendor(s) as per the agreed payment terms between Contractor and their sub-vendor.
15.03.00	<p>For Local Transportation</p> <p>All Plant and Equipment including mandatory spares and recommended spares (if ordered) Hundred Percent (100%) of Local Transportation charges (including port clearance, port handling and port charges etc., if applicable, and inland transit insurance charges) for the plant and equipment including mandatory spares and also recommended spares (if ordered) shall be paid to</p>

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	<p>the Contractor pro-rata to the value of the equipment/spares received at site and on production of invoices by the Contractor. The aggregate of all such pro-rata payments shall, however, not exceed the total amount identified in the Contract for Local Transportation. However, where item wise local transportation charges (including port clearance, port handling and port charges etc., if applicable) have been identified in the Contract, the payment for the same shall be made after receipt of the equipment/spares at site, based on the charges so identified in the Contract.</p>
15.04.00	<p>For Site Fabricated Structural Works Price Component of the Contract Price :</p> <p><i>The payment for running bills will normally be released within 30 days of 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. 60% of RA Bills complete and correct in all respects and certified by BHEL Engineer, shall be paid within 15 days of receipt. Balance payment shall be within 30 days.</i></p>
15.04.01	<p>90 % (Ninety percent) of the total Site Fabricated Structural Works Price Component of Contract Price shall be paid progressively on certification by the Project Manager for the quantum of work completed and by Project Manager's field quality surveillance representative for the successful completion of quality check points involved in the quantum of work billed.</p> <p>Further, break up (if any) for activities involved in completion of work shall be mutually agreed during execution of contract in line with GCC.</p> <p>The release of first progressive payment for Site Fabricated Structural works shall also be subject to submission of documentary evidence by the Contractor towards having taken the insurance policy(ies) in terms of relevant provisions of 02.23.00 (Insurance) and acceptance of same by the Owner/BHEL.</p>
15.04.02	<p>Two Percent (2%) of total Site Fabricated Structural Works Price Component of Contract Price on Successful Completion of Trial/Initial Operation including all associated auxiliaries and ancillary works for Unit-3 and certification by the project manager of owner/customer/ BHEL.</p>

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15.04.03	<p>Two Percent (2%) of total Site Fabricated Structural Works Price Component of Contract Price on Successful Completion of applicable Performance Guarantee Tests for Unit- 3, to be conducted along with Trial/Initial operation as specified in Technical Specifications and issuance of Completion Certificate for Unit-3 by project manager of owner/customer/ BHEL.</p> <p>However, if for reasons not attributable to contractor, the performance Guarantee (PG) Test of the Facilities or the relevant part thereof cannot be successfully completed within the period of 01 (one) month from the date of Completion of Trial Operation, then 50% of the amount due on "Completion of Trial / Initial Operation along with PG Test" shall be released to the contractor without submission of any BG. Further, if for reasons not attributable to contractor, in case the performance Guarantee (PG) Test of the Facilities or the relevant part thereof cannot be successfully completed within the period of one year from the date of Completion of Trial Operation, then pending 50% amount shall be released upon submission of Bank Guarantee of equivalent value. Such BG shall be released after successful conductance of PG test.</p>
15.04.04	<p>One Percent (1%) of total Site Fabricated Structural Works Price Component of Contract Price on Successful completion of applicable Performance Guarantee Tests to be conducted after Trial/Initial operations as specified in Technical Specifications and issue of Operational Acceptance Certificate for Unit-3.</p> <p>However, if for reasons not attributable to contractor, in case the performance Guarantee (PG) Test of the Facilities or the relevant part thereof to be conducted after Trial/Initial operations cannot be successfully completed within the period of one year from the due date of completion of such PG test(s), then aforesaid 1% amount shall be released upon submission of Bank Guarantee of equivalent value. Such BG shall be released after successful conductance of PG test.</p>
15.04.05	<p>Two Percent (2%) of total Site Fabricated Structural Works Price Component of Contract Price on Successful Completion of Trial/Initial Operation including all associated auxiliaries and ancillary works for Unit-4 and certification by project manager of owner/customer/ BHEL.</p>
15.04.06	<p>Two Percent (2%) of total Site Fabricated Structural Works Price Component of Contract Price on Successful Completion of applicable Performance Guarantee Tests for Unit-4, to be conducted along with Trial/Initial operation as specified in Technical Specifications and issuance of Completion Certificate for Unit-4 by project manager of owner/customer/ BHEL.</p>

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	<p>However, if for reasons not attributable to contractor, the performance Guarantee (PG) Test of the Facilities or the relevant part thereof cannot be successfully completed within the period of 01 (one) month from the date of Completion of Trial Operation, then 50% of the amount due on "Completion of Trial / Initial Operation along with PG Test" shall be released to the contractor without submission of any BG. Further, if for reasons not attributable to contractor, in case the performance Guarantee (PG) Test of the Facilities or the relevant part thereof cannot be successfully completed within the period of one year from the date of Completion of Trial Operation, then pending 50% amount shall be released upon submission of Bank Guarantee of equivalent value. Such BG shall be released after successful conductance of PG test.</p>
15.04.07	<p>One Percent (1%) of total Site Fabricated Structural Works Price Component of Contract Price on Successful completion of applicable Performance Guarantee Tests to be conducted after Trial/Initial operations as specified in Technical Specifications and issue of Operational Acceptance Certificate for Unit-4.</p> <p>However, if for reasons not attributable to contractor, in case the performance Guarantee (PG) Test of the Facilities or the relevant part thereof to be conducted after Trial/Initial operations cannot be successfully completed within the period of one year from the due date of completion of such PG test(s), then aforesaid 1% amount shall be released upon submission of Bank Guarantee of equivalent value. Such BG shall be released after successful conductance of PG test.</p>
15.05.00	<p>For Installation Services – Erection and Commissioning - excluding Civil works and Site Fabricated Structural Works Portion:</p>
15.05.01	<p>Ninety Percent (90%) of the Installation Services – Erection and Commissioning - component of Contract Price (excluding Civil and Structural works) shall be paid on pro-rata basis against progressive erection of the identified equipment on certification by the Project Manager for the quantum of work completed and on certification by owner/customer/BHEL field quality assurance & surveillance representative for the successful completion of quality check points involved in the quantum of work.</p> <p>Further, break up (if any) for activities involved in completion of erection work shall be mutually agreed during execution of contract.</p>

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	<p>The release of first progressive payment for Installation Services – Erection and Commissioning works shall also be subject to submission of documentary evidence by the Contractor towards having taken the insurance policy(ies) in terms of relevant provisions of Clause 02.23.00 (Insurance) and acceptance of same by the Owner/BHEL.</p>
15.05.02	<p>Two Percent (2%) of total Installation Services – Erection and Commissioning - Component of Contract Price (excluding Civil and Site Fabricated Structural Works) on Successful Completion of Trial/Initial Operation including all associated auxiliaries and ancillary works for Unit-3 and certification by the owner/customer/BHEL.</p>
15.05.03	<p>Two Percent (2%) of total Installation Services – Erection and Commissioning - Component of Contract Price (excluding Civil and Site Fabricated Structural Works) on Successful Completion of applicable Performance Guarantee Tests for Unit-3, to be conducted along with Trial/Initial operation as specified in Technical Specifications and issuance of Completion Certificate for Unit-3 by owner/customer/BHEL.</p> <p>However, if for reasons not attributable to contractor, the performance Guarantee (PG) Test of the Facilities or the relevant part thereof cannot be successfully completed within the period of 01 (one) month from the date of Completion of Trial Operation, then 50% of the amount due on "Completion of Trial / Initial Operation along with PG Test" shall be released to the contractor without submission of any BG. Further, if for reasons not attributable to contractor, in case the performance Guarantee (PG) Test of the Facilities or the relevant part thereof cannot be successfully completed within the period of one year from the date of Completion of Trial Operation, then pending 50% amount shall be released upon submission of Bank Guarantee of equivalent value. Such BG shall be released after successful conductance of PG test.</p>
15.05.04	<p>One Percent (1%) of total Installation Services – Erection and Commissioning - Component of Contract Price (excluding Civil and Site Fabricated Structural Works) on Successful completion of applicable Performance Guarantee Tests to be conducted after Trial/Initial operations as specified in Technical Specifications and issue of Operational Acceptance Certificate for Unit-3. However, if for reasons not attributable to contractor, in case the performance Guarantee (PG) Test of the Facilities or the relevant part thereof to be conducted after Trial/Initial operations cannot be successfully completed within the period of one year from the due date of completion of such PG</p>

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	test(s), then aforesaid 1% amount shall be released upon submission of Bank Guarantee of equivalent value. Such BG shall be released after successful conductance of PG test.
15.05.05	Two Percent (2%) of total Installation Services – Erection and Commissioning - Component of Contract Price (excluding Civil and Site Fabricated Structural Works) on Successful Completion of Trial/Initial Operation including all associated auxiliaries and ancillary works for Unit-4 and certification by project manager of owner/customer/ BHEL
15.05.06	Two Percent (2%) of total Installation Services – Erection and Commissioning - Component of Contract Price (excluding Civil and Site Fabricated Structural Works) on Successful Completion of applicable Performance Guarantee Tests for Unit-4, to be conducted along with Trial/Initial operation as specified in Technical Specifications and issuance of Completion Certificate for Unit-II by project manager of owner/customer/ BHEL. However, if for reasons not attributable to contractor, the performance Guarantee (PG) Test of the Facilities or the relevant part thereof cannot be successfully completed within the period of 01 (one) month from the date of Completion of Trial Operation, then 50% of the amount due on "Completion of Trial / Initial Operation along with PG Test" shall be released to the contractor without submission of any BG. Further, if for reasons not attributable to contractor, in case the performance Guarantee (PG) Test of the Facilities or the relevant part thereof cannot be successfully completed within the period of one year from the date of Completion of Trial Operation, then pending 50% amount shall be released upon submission of Bank Guarantee of equivalent value. Such BG shall be released after successful conductance of PG test.
15.05.07	One Percent (1%) of total Installation Services Component – Erection and Commissioning - of Contract Price (excluding Civil and Site Fabricated Structural Works) on Successful completion of applicable Performance Guarantee Tests to be conducted after Trial/Initial operations as specified in Technical Specifications and issue of Operational Acceptance Certificate for Unit-4. However, if for reasons not attributable to contractor, in case the performance Guarantee (PG) Test of the Facilities or the relevant part thereof to be conducted after Trial/Initial operations cannot be successfully completed within the period of one year from the due date of completion

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	of such PG test(s), then aforesaid 1% amount shall be released upon submission of Bank Guarantee of equivalent value. Such BG shall be released after successful conductance of PG test.
15.05.08	-VOID-
15.05.09	If PG test is not applicable for the tendered package, payment against successful completion of PG test shall be payable against successful completion of Trial operation.
15.05.10	-VOID-
15.05.11	If PG test is not applicable for the tendered package, payment against successful completion of PG test shall be payable against successful completion of Trial operation.
15.06.00	<p>For Payment terms for Training</p> <p>100% of amount for each training module shall be paid upon completion of the corresponding module on certification by the Owner/Customer/BHEL.</p> <p>The basis for the pro-rata payments for this shall be the Billing Break-up (BBU) to be finalised subsequently after award of Contract.</p>
15.07.00	<p>For Type Test:</p> <p>100% of each Type Test Charges shall be paid to the Contractor upon conductance of the corresponding Type Test and Certification by the Engineer thereon Owner/Customer/BHEL.</p>
15.08.00	PAYMENT OF SERVICE(S) CHARGES: O&M CHARGES (IF APPLICABLE, AS SEPARATE LINE ITEM OF PRICE FORMAT)
15.08.01	<p>100% of basic price, along with applicable GST, on successful completion of the activity will be released on pro-rata basis.</p> <p>However, Payment of O&M, if applicable will be released on quarterly basis or as specified in NIT, on Site certification/ certification by engineer.</p> <p>Note:</p> <ol style="list-style-type: none"> 1. Bidder shall consider O&M of DBA system for period of 12 months from Completion of facilities. 2. The price component of O&M is fixed to be 0.5 % of the cumulative Total Contract Value. 3. In the event that the handover of the Dry Bottom Ash (DBA) System to the Owner (DVC) is delayed beyond 12 months from the date of completion of facilities, for reasons not attributable to the Bidder, the Bidder shall be entitled to pro-rata payment for O&M activities during the extended period. Such payment shall be calculated on a monthly basis, derived from the rate

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	corresponding to 12 months of O&M services valued at 0.5% of the total contract value.
15.09.00	<p>Notes:</p> <ul style="list-style-type: none">i. Any addition due to adjustment to the Contract Price shall be payable in the similar manner as provided in the clauses above. The price adjustment amount corresponding to advance payment (if applicable) shall be clubbed with the first progressive payment of that equipment. Reduction to the Contract Price, if any, due to price adjustment provisions, shall be affected by recovering 100% of the reduction amount (including advance if any) from any of the Contractor's bills falling immediately due for payment.ii. -void-iii. If the documents are routed through Bank, then all bank charges will be to vendor's account.iv. In general, seller/contractors are required to issue Tax Invoice inclusive of PVC value (if applicable) wherever indices are available. In case PVC indices not available, vendors to submit PVC invoices on availability of applicable indices. However, Seller/contractor shall ensure to submit PVC calculations on quarterly for the shipments made during the previous quarter for buyer's clearance and acceptance before making PVC claim.v. Any negative PVC, if not adjusted in earlier payments, will be adjusted. from the bills available with BHEL or future bills.vi. Payment against invoices raised for material dispatch (i.e., for Clause 15.01.03 and 15.02.01 of TCC as per tender conditions) shall be made upon submission of a complete set of valid documents as specified under the respective payment terms. <p>Vendors may opt for either of the following payment terms:</p> <ul style="list-style-type: none">• Direct Payment Terms<ul style="list-style-type: none">o Payment within 45 days for Micro and Small Enterprises (MSEs)o Payment within 60 days for Medium Enterpriseso Payment within 90 days for Non-MSME vendors <p>Provision for Discounting through TReDS Platform:</p>

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MSME vendors can also opt for payments through TReDS. All invoices received from MSME suppliers shall be uploaded by Bharat Heavy Electricals Limited on the Trade Receivables Discounting System (TReDS) platform, enabling suppliers to avail discounting of their accepted trade receivables.

Presently, BHEL has onboarded the following TReDS platforms: RXIL, M1xchange, Invoicemart, DTX, C2treds. Vendors may register on any of the above platforms to avail the intended benefits.

-OR-

- **Indigenous Usance Letter of Credit (LC)**
 - 45 days credit period for MSEs
 - 60 days credit period for Medium Enterprises
 - 120 days credit period for Non-MSME vendors

The details of LC are as follows:

- Payments will be made through an irrevocable Indigenous Letter of Credit and Payment will be released after completion of the usance credit period and upon receipt of a complete set of required documents by the beneficiary bank.
- Based on shipment requirements, the LC may be opened in splits to cover three months' requirements.
- The Indigenous LC shall be opened based on the three-month dispatch plan, finalized in accordance with the approved BBU and supply schedule.
- A revolving LC may also be operated for appropriate values.
- The supplier shall intimate the material readiness plan for opening the LC.
- Documents for negotiation under the LC must be presented within 21 days from the date of shipment and within the validity period of the LC.
- Respective bankers' LC charges shall be borne by the respective parties.
- Charges for extension or any other charges arising due to vendor-related reasons shall be borne by the vendor.

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	<ul style="list-style-type: none"> • For MSME bidders opting for LC payment terms, the quoted price shall be evaluated after adding 1% to the quoted value. • MSME bidders shall be required to submit declaration for choosing the payment mode between a) Direct Payment Terms or b) Indigenous Usance Letter of Credit (LC) in Annexure -K (enclosed with this corrigendum) along with their techno-commercial (Part-I) Bid.
15.10.00	DOCUMENTS TO BE SUBMITTED BY VENDOR
a)	<p>Payment Under main supply and mandatory spares, against dispatch of materials:</p> <ul style="list-style-type: none"> i) Invoice ii) LR / Courier receipt / RR (indicating Invoice No., no. of boxes, PTL (if applicable) etc.) (For indigenous supplies) iii) Bill of Lading or Air Way Bill (For imported items) iv) COO - Certificate of Origin (For imported items) v) Packing List: Must be indicating No. of boxes, Packing size, Gross weight and net weight of each package, Contents of the package with cross reference to BoM item code no. or item serial no. and Quantity of each item separately vi) Duty drawback (if applicable) documents: As per applicable law vii) E-way bill as may be applicable. Viii) Documentary evidence by the Contractor towards having taken the insurance policy(ies) in terms of relevant provisions of Clause 02.23.00 (Insurance) and acceptance of same by the Owner/BHEL
b)	<p>Payment Under main supply and mandatory spares, against receipt of materials at site:</p> <ul style="list-style-type: none"> i) Invoice ii) Bill of Entry
c)	<p>For Claiming MRC Payment:</p> <ul style="list-style-type: none"> i) Commercial Invoice ii) Material Receipt Certificate-MRC (copy), duly signed by BHEL / Customer

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d)	<p>FOR CLAIMING ERECTION & COMMISSIONING, CIVIL & STRUCTURAL PAYMENT:</p> <p>Along with GST invoice, Running Account Bill (RAB) & Measurement Book (MB), in BHEL format, following additional documents need to be submitted:</p> <ol style="list-style-type: none"> i. Proof of wages paid (up to previous RAB / Invoice). ii. Monthly EPF remittance challan (if applicable). Up to previous RAB / Invoice) iii. Monthly ESI remittance challan Up to previous month)/ W.C. Insurance Policy, Valid Labor License (if applicable). iv. Any other document as informed by BHEL. v. Bank Guarantee, if applicable as per Notes of payment terms. <p>FOR CLAIMING PAYMENT AGAINST COMMISSIONING (NO LOAD), TRIAL OPERATION, PG/ DEMONSTRATION TEST(S) AT SITE, HANDING OVER:</p> <ol style="list-style-type: none"> i. GST invoice ii. Certification for completion of activity as per payment terms from BHEL/Customer. iii. HR compliances, store NOC and any other documents, as per checklist, if any issued by REGION/ISG during detailed PO/WO or execution of the contract, Compliance of these is required before 1st retention payment release.
15.10.02	<p>For claiming payment for services (demonstration charges, Supervision of erection / commissioning charges, O&M charges (if applicable, As separate line item of price format):</p> <ol style="list-style-type: none"> i) GST compliant Invoice ii) Certification for completion of activity as per payment terms from BHEL/Customer.
15.10.03	<p>FOR CLAIMING PVC AMOUNT:</p> <ol style="list-style-type: none"> (i) GST compliant invoice (ii) PVC calculation duly approved by BHEL (iii) All documents in support of PVC calculation
15.10.04	<p>PRICE VARIATION CLAUSE: -</p>

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	<p>PVC shall be applicable for Supply & E&C portions, Structural Package as per Appendix-2 (PVC) and in line with the NIT, amendment's clarifications there off, if there is delay beyond original overall completion schedule not attributable to vendor.</p> <p>Any and all the other commercial terms and conditions shall be in line with the GCC Commercial Terms and Conditions attached along with this document.</p>
15.11.00	<p>NON-PAYMENT OF INTEREST</p> <p>Notwithstanding anything to the contrary contained in any other document comprising the contract, no interest shall be payable to the Seller/Contractor on any money or balances including but not limited to the security amount, bank guarantee amount, EMD, retention money, any bills or any amount withheld which may become due owing to difference or misunderstanding or any dispute between the BHEL and the Contractor, or any delay on the part of BHEL in making periodical or final payment or any other aspects incidental thereto.</p>
15.12.00	<p>Retention amount:</p>
15.12.01	<p>Retention Amount shall be 5% of contract value and shall be furnished before the first RA Bill becomes due for payment.</p>
15.12.02	<p>The Retention amount of 5% of the contract value may be accepted in the following forms:</p> <ul style="list-style-type: none">i. Cash (as permissible under the extant Income Tax Act).ii. Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL.iii. Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Consultant furnishing the security and duly endorsed/ hypothecated / pledged, as applicable, in favour of BHEL).iv. Bank Guarantee shall be in the prescribed formats from Consortium Bank as mentioned in INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS OF CONTRACT (GCC) Volume-IC. The validity of BG shall be initially for the contract period & shall be extended up to acceptance of final bill, if the final bill is not settled during the contract period.

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	<p>v. Fixed Deposit Receipt issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Consultant, a/c BHEL).</p> <p>vi. Insurance Surety Bonds.</p>
15.12.03	<p>On successful bidder's request, the Retention Amount can also be recovered at the rate of 10% of the gross amount, progressively, from each of the running bills of the Consultant till the total amount of the required retention amount is collected.</p> <p>In case, Contractor opts for cash deduction from RA bills in the beginning & subsequently submit 5% of the Contract Value as Retention amount in any form as mentioned above, then refund of deducted retention amount may be permitted to Consultant.</p>
15.12.04	<p>Note: BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.</p>
15.12.05	<p><u>Refund of Retention Amount shall be as follows:</u></p> <p>Retention amount shall be released after successful completion of supply and along with last RA Bill. Retention amount shall be released after deduction all expenses/ other amounts due to BHEL under the contract/ other contracts entered into with them (Consultant) by BHEL.</p>
15.13.00	<p><u>Amount linked to Safety Aspects/ compliance to Safety Rules:</u></p> <p>Amount linked to Safety Aspects/ compliance to Safety Rules' should be equal to 1 % of the cumulative total of Service Portion of the Contract, i.e. Civil + Installation/ Erection + Structural Works.</p> <p>The amounts linked to Safety Aspects / Compliance to Safety Rules including aforesaid retained amount shall be payable in part or full based on safety compliance duly certified by Project Manager and Safety-in-charge on quarterly basis.</p> <p>A. 10% amount (calculated as 0.1 Y of the service portion amount of RA bill) shall be linked to Fatal/Major Accidents, and</p>

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	<p>B. 90% amount (calculated as 0.9 Y of the service portion amount of RA bill) shall be linked to various Safety Aspects specified in HSE Plan for Site operation by Contractor.</p> <p>While raising each RA Bill, Contractor shall claim Amount linked to Safety Aspects/ Compliance to Safety in such a manner that amount claimed is equal to Y% of the service portion (i.e. Civil/ Installation/ Erection/Structural Works etc.) of RA Bill.</p> <p>Where</p> <p>Y= 1% of Total Amount for Construction/service portion of the contract i.e. Civil Installation/Erection, Structural Works etc.)</p>
15.13.01	<p>The amount as elaborated at para-A shall be withheld from first and second monthly RA bill of the respective quarter/three-month period and shall be released in part or full based on safety compliance duly certified by Project Manager and Safety-in-charge on quarterly basis. The amount for the entire quarter (i.e. RA bills raised during a 3-month period) shall be paid to the Contractors at the end of that three months' period along with 3rd/last RA Bill for the quarter/three months' period upon complying the following conditions:</p>
15.13.02	<p>Amount of RA bill linked to FATAL/ Major Accidents (0.1 Y of the service portion amount of RA bill as mentioned above)</p> <p>a) No fatal injury or accident-causing death in that three months' period.</p> <p style="text-align: center;">And</p> <p>ii) No Major injury or accident causing 25% or more permanent disablement to workmen or employees in that three-month period.</p> <p>Permanent disablement shall have the same meaning as indicated in The Workmen's Compensation Act' 1923 or IS 3786.</p> <p>In case of any fatal injury or accident as elaborated above occurs during that three-month period, the stipulated amount (0.1Y) subject to minimum of Rs 10 Lakh per fatality shall be forfeited and</p>

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	<p>shall not be payable to the contractor under the contract. In case, the amount to be deducted/forfeited exceeds the amount linked to Fatal/ Major Accidents, the same shall be recovered from remaining Amount (0.9Y) linked to Compliance of Safety Rules and/or any other payments immediately due to the contractor under the Contract.</p> <p>In case of any Major injury or accident causing 25% or more permanent disablement to workmen/worker or employees occurs during that three-month period, Rs 4 lakh per Major injury shall be deducted from the amount (0.1Y) linked to Fatal/ Major Accidents and shall not be payable to the Contractor under the contract. In case, the amount to be deducted/forfeited exceeds the amount linked to Fatal/ Major Accidents, the same shall be recovered from remaining Amount (0.9Y) linked to Compliance of Safety Rules and/or any other payments immediately due to the Contractor under the Contract.</p> <p>Further, in case, Contractor doesn't raise RA Bills in any three-month period/quarter and if any fatal injury and/or major accident takes place in that period, Construction Manager shall deduct the amount [Rs 10 Lakh per fatality and Rs 4 lakh per Major injury] pertaining to this particular quarter from his next RA bill/due payment. In case, the amount to be deducted/forfeited exceeds the amount linked to Safety, the same shall be recovered from any other payments immediately due to the contractor under the Contract.</p> <p>The amount deducted/forfeited as mentioned above shall be in addition to the compensation payable to the workmen / employees under the relevant provisions of the Workmen's Compensation Act' 1923 and rules framed there under or any other applicable laws as applicable from time to time.</p>
15.13.03	<p>Amount of RA Bill linked to Compliance of Safety Rules (0.9Y i.e. 90% of amount as elaborated as mention at clause).</p> <p>Aforesaid amount (on quarterly basis) shall be payable to Contractor in five equal parts under five heads as under:</p> <p>(i) Amount payable on deployment of required Safety Personnel</p>

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One fifth of the amount specified at clause 15.13.00.B (calculated as 0.18Y of Service portion amount of RA Bill), on quarterly basis, shall be paid upon certification by Construction Manager in consultation with Safety dept. that required number of Safety personnel as per HSE ORGANIZATION (**Annexure-21**) have been deployed. The aforesaid amount linked to deployment of requisite safety personnel shall be paid as under:

a) 50% of the amount referred in 15.13.03 (i), for deployment of Safety Supervisors shall be paid on pro-rata basis depending upon the actual no. of Safety Supervisors deployed vis-à-vis actual requirement:

(Amount to be paid= 0.09Y x Service portion of RA bill amount x (a/b)

Where 'a' is actual no. of Safety supervisors deployed.

And

'b' is required no. of Safety supervisors as per HSE Plan for site operation by contractor.

In case, actual no. of Safety supervisors deployed is more than requisite number (i.e. a/b is more than 1), the amount to be paid shall be restricted to 0.09Y.

b) 50% of the amount referred in clause 15.13.03 (i), for deployment of Safety Officers shall be paid on pro-rata basis depending upon the actual no. of Safety Officers deployed vis-à-vis actual requirement:

(Amount to be paid) = 0.09Y x Service portion of RA bill amount x (a/b)

Where 'a' is actual no. of Safety Officers deployed

And

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'b' is required no. of Safety Officers as per HSE plan for site operation by contractor. In case, actual no. of Safety Officers deployed is more than requisite number (i.e. a/b is more than 1), the amount to be paid shall be restricted to 0.09Y.

a) In case aforesaid requisite no. of Safety personnel are not deployed by contractor, amount not to be paid as calculated above for that particular quarter/three-month period shall be forfeited and shall not be payable to the contractor under the contract.

(ii) Amount payable on providing requisite Personal Protective Equipment & Safety Equipment

One fifth of the amount specified at Clause 15.13.00.B (calculated as 0.18Y of Service portion amount of RA Bill), on quarterly basis, shall be paid upon certification by Construction Manager in consultation with Safety dept. that contractor has adhered to the requirements of Personal Protective Equipment.

In case of non-compliance by contractor, warning letter/Noncompliance shall be issued by Construction Manager /Safety Officer of BHEL. Further, if more than two such warning letters/Non-Compliance Memos are issued in a quarter/three monthly period, above mentioned amount for that particular quarter/three-month period shall be forfeited and shall not be payable to the contractor under the contract.'

Note: - The agency should ensure sufficient inventory of personal protective equipment (PPEs) prior to initial mobilization. After identifying the need of the required PPEs for various activities performed at the site, an additional inventory of approx. 20% of required PPEs should be maintaining during the execution of the work. If sub agency fail to provide the PPEs to worker the same may be issued by BHEL and cost for the PPEs will be recovered from the contractor from regular RA Bill with 30 % overhead charges.

(iii) Amount payable on providing requisite Safety Induction and Training

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	<p>One fifth of the amount specified at Clause 15.13.00 B (calculated as 0.18Y of Service portion amount of RA Bill), on quarterly basis, shall be paid upon certification by Construction Manager in consultation with Safety dept. that contractor has adhered to the requirements of imparting Safety training as per Clause 9.0 (HSE Training & Awareness) to at least 90% of its employees/workmen (who have not been previously provided with requisite training) in a quarter/ three months' period. In case contractor fails in meeting the aforesaid requirement, above mentioned amount for that particular quarter/three-month period shall be forfeited and shall not be payable to the contractor under the contract.</p> <p>(iv) Amount payable on providing requisite Medical and First Aid Amenities</p> <p>One fifth of the amount specified at clause 15.13.00 B (calculated as 0.18Y of Service portion amount of RA Bill), on quarterly basis, shall be paid upon certification by Construction Manager in consultation with Safety dept. that contractor has adhered to the requirements of Medical Facilities & First Aid Amenities. In case contractor fails to provide Medical Facilities and First aid amenities as per requirement even on one incidence in any quarter/three-month period, above mentioned amount for that particular quarter/three-month period shall be forfeited and shall not be payable to the contractor under the contract.</p> <p>(v) Amount payable on compliance to Work Permit System</p> <p>One fifth of the amount specified at Clause 15.13.00 B (calculated as 0.18Y of Service portion amount of RA Bill), on quarterly basis, shall be paid upon certification by Construction Manager in consultation with Safety dept. that contractor has adhered to the requirements of Work Permit System). In case of non-compliance by contractor, warning letters/Non-Compliance Memos shall be issued by Construction Manager/ Safety Officer of BHEL. In case of issuance of more than two such warning letters/Non-Compliance Memos in a quarter/three monthly period, above mentioned amount for that particular quarter/three-month period shall be forfeited and shall not be payable to the contractor under the contract.</p>
15.14.00	-VOID-

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15.15.00	<p><u>Price Break-up and Billing Break-up (BBU)</u></p> <p>The basis for the pro-rata payments above shall be as according to the Billing Break-up (BBU) to be finalized subsequently after award of Contract.</p> <p>The Contractor shall prepare and submit to BHEL for approval with Seven days, a break-up of the Contract Price in the currencies of the Contract in line with Annexure 28.</p> <p>The aggregate sum of the Contractor's price break-up shall be equal to the Total Contract Price. The break-up thus submitted shall be finalised subject to acceptance and approval by BHEL.</p> <p>The Billing Breakup for Mandatory Spares shall be submitted to the BHEL for approval as per the format enclosed as Annexure -17 indicating therein the details such as Make, Model number, Drawing/Datasheet number and Part number of all spare items. The relevant drawings/documents shall be submitted along with Billing Break-Up. The break-up thus submitted shall be approved by BHEL in line with the approval of billing break-up by Owner/Customer. Bidders are advised to price their bids in such a manner that the Mandatory spares Component of the bid price should not be less than 5 % of the cumulative total Ex-works Price of Main Equipment.</p> <p>The BBU shall be interlinked with the agreed detailed PERT Network of the Contract, setting forth starting and completion dates for the various key phases of the Facilities and the submitted Break-up of the Contract Price for Main Equipment supplies shall contain the date of dispatch necessarily.</p> <p>The Contractor shall, by the 10th April of every year, furnish the BBU value of supplies sourced from Micro and Small Enterprises (MSEs) along with the total BBU value of supplies dispatched by it during the preceding financial year as per the format enclosed as Annexure -25.</p> <p>The unit / set / system / package / path for the purpose of the payment under Clause 14.04.01, 14.05.01,14.06.01, shall be either as per price format or mutually agreed during approval of billing schedule and shall be in line with GCC. Further, BHEL reserves the right to withhold any amount</p>
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	<p>for the agreed scope of work, not completed/ partially completed/ pending punch points etc. Decision of the Purchaser in this regard shall be final and binding on the seller/ contractor.</p> <p>The Billing Break Up shall be generally on item rate basis. However, for the items which are generally supplied and billed on weight (tonnage) basis, the Billing Break-Up may be considered on weight (tonnage) basis.</p> <p>Further, the BHEL reserves the right to withhold any amount for the agreed scope of work, not completed/ partially completed/ pending punch points etc. Decision of the BHEL, in this regard shall be final and binding on the seller/ contractor.</p>
15.16.00	<p><u>Price Bid</u></p> <p>a) Price Basis for supply (plant and equipment including spares): Ex-works Basis, inclusive of type test, packing & forwarding charges including sea-worthy packing (wherever applicable), insurance all taxes & duties, levies etc., except Goods & Service Tax (GST).</p> <p>All import implications including but not limited to Basic Customs Duty, Education cess, antidumping duty, safeguard duty etc. applicable for imported items shall be included in the ex-works price of plant and equipment including spares.</p> <p>Ownership of the Plant and Equipment (including spare parts) to be supplied shall be transferred to the Purchaser when the Plant and Equipment (including spares) are loaded on to the mode of transport to be used to convey the Plant and Equipment (including spares) from the works to the site.</p> <p>Transportation of goods up to Destination shall be arranged by vendor on behalf of BHEL.</p> <p>b) Price Basis for E&C and other Services: Basic price basis inclusive of all taxes & duties, levies, insurance etc., except Goods & Service Tax (GST).</p> <p>c) Price Basis for Mandatory Spares:</p>

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15.17.00	<p>Custom Clearance</p> <p>For all the supplies / services for the execution of the contract, rendered directly from outside India to the country of project site, the applicable taxes, duties Charges, Royalties, etc. in the country of origin shall be borne by seller / contractor and should be included in the basic price. Same shall not be payable extra by BHEL.</p> <p>For the imports, the quoted basic price includes seaworthy packing & overseas forwarding charges, applicable basic custom duty, education cess, anti-dumping duty, safeguard duty, port clearance charges (at Indian Port of Import) and any other taxes & duties. However, GST shall be payable extra as applicable.</p> <p>Custom clearance for all the items imported into the project shall be in bidder's scope. Also, all type of duties, levies, fees, charges (if any) imposed by relevant agencies for Custom / any other clearance shall be to bidder's account.</p> <p>Seller/ Contractor alone shall be responsible for any delay in getting import license or non-availability of the same or completion of other related formalities. Purchaser shall not be responsible for any financial liability, whatsoever, on this account.</p> <p>In case any such benefits are published by GOI during execution of the contract, the Buyer shall submit the required documents to the seller / contractor to avail such benefit, however the benefit so received is to be passed on to the Buyer by the Seller / contractor. Alternatively, such benefits will be recovered by Buyer from the seller / contractor's bill.</p>
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CHAPTER-XVI : PROVENNESS

16.00.00	<p>PROVENNESS CRITERIA</p> <p>Bidder to note that following provenness requirements to be met and further clearance to be taken from BHEL/DVC for vendor approval as per procedure laid down for vendor approval from DVC. Only BHEL & DVC approved vendor shall be considered before placement of order on sub-vendors and same has to be ensured by the successful bidder. The provenness requirement shall be reckoned as on 26.07.2024 unless otherwise specified in the respective clause.</p>
16.01.00	<p>Provenness Criteria for Dry Bottom Ash Crusher(s):</p> <p>Dry Bottom Ash Crusher(s) offered by the Bidder shall be only from such manufacturer(s), who has previously designed (either by itself or under collaboration / licensing agreement) and manufactured / got manufactured for design crushing capacity of not less than 20 TPH for dry bottom ash system of coal/lignite fired boiler. The above crusher(s) should have been in successful operation in at least one (1) plant for at least one (1) year as on the due date of bid submission for this tender..</p> <p>Notes for Clause 16.01.00</p> <ol style="list-style-type: none">1. "Qualified Dry Bottom Ash Handling System Manufacturer (QDBAHSM)" means a manufacturer meeting requirement stipulated at Clause A1.2. The Bidder shall also be considered qualified, in case the award for executing the reference works (Dry Bottom Ash Handling System) has been received by the Bidder either directly from owner of plant or any other intermediary organization. However, a certificate from such owner of plant or any other intermediary organization shall be required to be furnished by the Bidder in support of Bidder claim of meeting the qualification requirement as above. Further, certificate from owner of the plant shall also be furnished by the Bidder for the successful operation of the Dry Bottom Ash Handling System as specified above.3. Holding Company as a Qualified Dry Bottom Ash Handling System Manufacturer

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	<p>(QDBAHSM)</p> <p>i. A Holding Company, singularly or collectively along with its Subsidiaries (held either directly or indirectly), meeting the requirements of Clause A.1 above shall also be considered as Qualified Dry Bottom Ash Handling System Manufacturer (QDBAHSM).</p> <p>ii. In such a case, if the Holding Company is a Collaborator/ Licensor/ Technology provider for Bidder as a QDBAHSM, the Holding Company and all such subsidiaries lending strength/ experience to the Holding Company for meeting the requirements of clause A.2 above should necessarily be part of the Letter of Support being submitted by the Bidder for successful performance of the contract as per format enclosed with the bidding documents.</p> <p>iii. Technology Transfer Agreement (as applicable)</p> <p>The technology transfer agreement shall cover transfer of technological know-how for Dry Bottom Ash Handling System in the form of complete transfer of design dossier, design software's, drawings and documentation, quality system manuals and imparting relevant personnel training to the Indian Manufacturing Company.</p>
16.02.00	For provenness criteria of other items/system/sub-system bidder to follow DVC specification provided in annexure with this technical specification.
16.03.00	Further, bidder to provide a declaration regarding Sourcing of the Systems Related to Completion of the Ash Handling System of 2X800 MW Koderma Project in Annexure-27-A .
16.04.00	The bidder shall submit the details of their credential or Bidder's Sub-vendor/ credentials for provenness requirement in clause 17.01.00 within a period of one month from issue LOA.
16.05.00	Successful Bidder shall complete ordering for the item/sub-system mentioned above within one month of issue of LOA of this tender and shall submit " Accepted copy of award of work" to BHEL.

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CHAPTER-XVII : LIQUIDATED DAMAGES

17.00.00	Timely dispatch/delivery and completion of other schedules as stipulated in Order/Contract shall be the essence of Order/Contract. If the Seller/Contractor fails to complete the dispatch/delivery and other schedules within the time period stipulated in Order/Contract, for reason not attributable to BHEL, it shall be lawful for purchaser to recover damages for breach of Order/Contract and hereunder.
17.01.00	<p>LD for delay in successful completion of Facilities (excluding Mandatory Spares):</p> <p>One half of one percent (1/2%) of contract value (excluding Mandatory Spares), for each week of delay in successful Completion of Facilities of each Unit under the package as per the scope of work of the Contractor.</p> <p>Liquidated Damages for delay in supply of spares beyond the dates stipulated under the Contract shall be as follows:</p> <p>One half of one percent (1/2%) Ex-works price of the delayed Mandatory Spares, per week or part thereof of delay, subject to maximum of five percent (5%) of the total Ex-works price of all mandatory spares included in the Scope of Work of the Contractor under the Contract.</p> <p>The total amount of Liquidated Damages for delay under the contracts will be subject to a maximum of 7.5 % of the total contract price.</p>

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CHAPTER-XVII : LIQUIDATED DAMAGES

17.02.00	<p>LIQUIDATED DAMAGES/PENALTIES FOR SHORTFALL IN GUARANTEED PERFORMANCE PARAMETERS:</p> <p>In case the results of the performance Guarantee tests as stipulated in the specifications show that the equipment have failed to meet the guaranteed performance requirements, the seller/ contractor shall carry out the modification, if necessary within 90 days of such tests. If the equipment fails to meet the guaranteed parameters at the end of above specified period of 90 days or reasonable time as permitted by Owner/Customer without any implication to BHEL. purchaser may at his discretion reject the equipment or accept after assessing the liquidated damages to be payable by the seller/contractor.</p> <p>Alternatively, in case the seller/ contractor does not fulfil the guaranteed parameters, BHEL may undertake to rectify the system/ equipment and expenditure incurred along with any other incidentals shall be recovered from the seller/ contractor. In case of un-remedied any excess consumption of Auxiliary Power consumptions and shortfall of other guarantee parameters for the ordered package as agreed by the seller/contractor in the contract, the seller/contractor shall be liable to pay BHEL by way of LD/Penalty for performance shortfall as stipulated in line with end user’s technical specification Sec-VI, Part-A, Sub sec-IV, Functional Guarantees & Liquidated Damages and its amendments, Clarifications etc. If any applicable for this contract.</p> <p>Maximum LD on account of short fall of guaranteed performance parameters shall be in line with the technical specification Sec-VI, Part-A, Sub sec-IV, Functional Guarantees & Liquidated Damages and its amendments, Clarifications etc. If any applicable for this contract.</p>
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