



**BHARAT HEAVY ELECTRICALS LIMITED, BHOPAL
EXTERNAL SERVICES HYDRO**

NOTICE INVITING TENDER

NIT No.: ESH/TONS/UNIT#3/T-01

External Services Hydro Group, BHEL, Bhopal invites sealed bid in two part (Part-I: Techno-commercial Bid; Part-II: Price Bid) for following work from experienced and financially sound bidder who fulfill the qualifying criteria contained in the tender document:

Name of work	Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL
Earnest Money	Rs. 2,62,000/- by EFT Visit http://www.bhel.com/index.php/latest_tenders
Tender cost	Rs. 2000 plus 18% GST (9% CGST+ 9% SGST) in the form of EFT (electronic fund transfer) receipt to be enclosed with techno-commercial bid. Visit http://www.bhel.com/index.php/latest_tenders
Date of uploading tender to web site	24.09.2020
Last Date & time for selling of tender	Tender document to be downloaded from BHEL web site (http://www.bhel.com/index.php/latest_tenders up to 08-10-2020, 16:00 hrs)
Due date & time of bid submission	On or before 09-10-2019, 11.00 Hrs
Due date & time of bid opening	09-10-2019, 14.00 Hrs onward
Venue for submission & opening of tender	Tender Room(Green Box), Ground Floor, Administrative Building BHEL, Piplani, Bhopal – 462022

NOTE:

- For detail, refer tender documents.**
- BHEL reserves the right to accept or reject any of the bid / all the bids or cancel or withdraw the invitation of tender without assigning any reason whatsoever and in such case no bidder / intending bidder shall have any claim arising out of such action by BHEL.**
- For LD Clause refer tender documents.**

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TENDER

NIT No.: ESH/TONS/UNIT#3/T-01

FOR

Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL



**EXTERNAL SERVICES HYDRO
BHARAT HEAVY ELECTRICALS LIMITED**

**(A Government of India Undertaking)
BHOPAL - 462 022 (M.P)**

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Part-1: Technical Bid

Section 1: INSTRUCTIONS TO BIDDERS

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NIT No.: ESH/TONS/UNIT#3/T-01

Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

PART-1: TECHNICAL BID



External Services Hydro, BHEL Bhopal

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REF: NIT No. ESH/TONS/UNIT#3/T-01

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PART – 1

Section 1 : INSTRUCTIONS TO BIDDERS



External Services Hydro, BHEL Bhopal

Part-1: Technical Bid

Section 1: INSTRUCTIONS TO BIDDERS

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1.1 The bid is invited in two parts viz. Part-I: Techno-commercial Bid and part-II: Price Bid. Part-I (Techno-commercial) Bid: should contain documents in the same order as listed below

1.1.1 Covering letter as per Annexure-A

1.1.2 Check List as per Annexure-B

1.1.3 EFT receipt of tender fee through bank with details as specified in Annexure-R

1.1.4 EFT receipt of EMD through bank with details as specified in Annexure-R

1.1.5 No deviation certificate – technical as per annexure-H

1.1.6 No deviation certificate – commercial as per annexure-I

1.1.7 Confirmation of participation in Reverse Auction Process as per “Annexure- K

1.1.8 Certificate of confirmation for not being black listed Annexure-L

1.1.9 Copy of work orders and completion certificates in support of past relevant work experience and other relevant documents as per requirement of clause 3.8.1 to 3.8.3 of Special Conditions of this tender document

1.1.10 Copy of duly audited balance sheet and Profit & Loss A/c of past three years ending 31st March 2020.

1.1.11 Banker’s certificate to prove bidder’s financial strength to undertake the work duly indicating the financial limits the bidder enjoys.

1.1.12 An attested copy of the Power of Attorney, in case an individual other than the sole Proprietor signs the tender

1.1.13 Type of Firm with supporting documents

1.1.13.1 **IN CASE OF AN INDIVIDUAL:** His full name, experience, address and nature of business

1.1.13.2 **IN CASE OF PARTNERSHIP FIRMS:** The names of all the partners with addresses and their experience. A copy of the partnership deed/ Instrument of Partnership duly certified by a Notary Public shall be enclosed.

1.1.13.3 **IN CASE OF COMPANIES:** Date and place of registration including date of commencement certificate in case of public companies and the nature of business carried on by the Company. Certified copies of memorandum and Articles of Association are also to be furnished. Also indicate names, addresses and experience of the Directors.

1.1.14 Human Resource totally available with the bidder with organization structure

1.1.15 Tools & Tackles totally available with the bidder.

1.1.16 Photocopy of PAN card in which PAN is readable.



Part-1: Technical Bid

Section 1: INSTRUCTIONS TO BIDDERS

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1.1.17 Copy of GSTN if applicable

1. 1.18 Note:

- (i) **Any deviation written elsewhere in the offer other than that in the document specified at clause 1.1.5 & 1.1.6 shall be treated as unread and shall not be considered for any purpose.**
- (ii) **The bidder should not give their price offer in Techno-commercial Bid. The techno-commercial bid containing price offer shall be accepted only if fulfilling all tender conditions without requirement of any further clarification.**

1.2 **Part-II(Price) Bid:** Price bid should contain only Price Offer to be submitted strictly as per enclosed Price Schedule. The Price Bid not submitted as per Price Schedule may not be considered.

1.3 Part-I (Techno-commercial) Bid and Part-II(Price) Bid should be put in separately sealed envelopes and each envelopes must be marked clearly as Techno-commercial Bid or Price Bid as the case may be. NIT Number and bidder's name & address should also be clearly mentioned on these envelopes. These two envelopes must be put in a bigger envelope and sealed properly. Top of the outer cover/envelop should contain following information:

1. NIT No. & Title of Work
2. Bid Opening date & time
3. Address/Venue of Bid Submission
4. Bidder's Name & Address

The address / venue for bid submission is as follows –

**Tender Room (Green Box),
Gr. Floor, Administrative Building
BHEL, Piplani, Bhopal-462022**

1.4 The bidder has to ensure that the tender is submitted on or before the time & date specified in NIT & should be dropped in the tender box (Green Colour) available in tender room at Ground Floor, Administrative Building.

1.5 Tenders received after 11.00 am will be treated as late tender and the same shall not be considered under any circumstance.

1.6 Opening of tender will start at 2.00 PM and only techno-commercial bid (Part-I) shall be opened on the date of opening.

1.7 Price bids (Part-II) will be opened for only those bidders who are found to be qualified after scrutiny and evaluation of techno-commercial offer and approval from MPPGCL.

1.8 The representative of the bidder should have authority letter from their principal / company for witnessing the tender opening.

1.9 **Any pre-tender queries should reach us at least 7 days before the due date of opening for techno-commercial bid, after which it will be assumed that**



the bidder have accepted the subject tender in totality. No deviation w.r.t. terms & conditions of the tender shall be acceptable.

1.10 The tenderer shall closely pursue all the clauses, specifications and drawings if any, indicated in the Tender Documents before quoting. The offers should be strictly in accordance with the tender specifications & General Instructions to the tenderer.

1.11 If there are varying or conflicting provisions made in any of the documents forming part of the tender, the accepting authority shall be deciding authority with regard to the intension of the document

1.12 Before submission of the bid, the bidder is advised to inspect the site of work and the environments and be acquainted with the actual working and other prevalent conditions, facilities available etc. and furnish the certificate as per enclosed Annexure "J". No claim will be entertained later on grounds of lack of knowledge.

1.13 Tenderer must fill up all the schedules and furnish all the required information as per the instructions given in various sections of the tender specification. Each and every page of the Bid document must be signed, stamped and serially numbered with index and all tables/Declaration forms/information sheets (Annexure A to Annexure R) should be duly filled in legible writing and Submitted Along With The Techno-Commercial Offer by the tenderer in token of complete acceptance thereof. The information furnished shall be complete in itself. Failing to do the same will leads to the cancellation of the project automatically

1.14 The tenderer shall quote the rates in figures (international numerals to be used) as well as in words (English language to be used). If on check there are found to be differences between the rates given by the contractor in words and figures or in the amount worked out by him in the schedule of quantities and general summary, the same shall be adjusted in accordance with the following rules:

- (a) In the event of a discrepancy between rates quoted in words and figures by tenderer, the rate quoted in words shall be taken as correct.
- (b) In the event of an error occurring in the amount column of Schedule of Quantities because of wrong extension of the unit rate and quantity, the unit rate shall be regarded as firm and extension shall be amended on the basis of the rate.
- (c) All errors in totalling in the amount column and in carrying forward totals shall be corrected.

If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date upto which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the purchaser, the bid is liable to be ignored.



1.15 In case of repetition of some items in different sections, the lowest rate quoted by the Contractor for such item of work in any section / sub-head of schedule of quantities shall be considered as the quoted rate for the item in all the different section/sub-head for payment.

1.16 All entries in the tender shall either be typed or be written in ink. Erasures/cutting/overwriting/use of whitener/ columns left unfilled in tenders, if any, shall be initialed along with date and time and numbered by the officials opening the tenders. The total number of such noticed alterations (or the absence of any alteration) should be explicitly mentioned on the first page of the bid and announced in public bid opening. In absence of any alteration / overwriting / blanks, the remark "no correction noted" should be written. Bid should be free from correction, overwriting, using corrective fluid, etc any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection.

1.17 Only tenderers who have previous experience in the work of the nature & description detailed in this tender specification are expected to quote for this tender

1.18 Offer from tenderer who does not have a proven and established experience in the field is not likely to be considered.

1.19 The tenderer shall give full information w.r.t. following in accordance with Check List at Annexure 'B'.

1.19.1 Permanent Account Number as allotted by the Income Tax Department

1.19.2 Goods & Service Tax Registration Number if applicable

1.19.3 Financial viability as per Performa enclosed as per Annexure -C.

1.19.4 A statement giving particulars of the various services rendered / in progress for similar works by the tenderers indicating the particulars & value of each work, site location, duration, date of completion as per Annexure -D.

1.19.5 The human resource/manpower that are totally available with him, & that will be employed by the tenderer for this work in the form of month-wise & category-wise deployment plan duly indicating the no. of Engineers, Supervisors, skilled & unskilled workers etc. as per Performa at Annexure -E.

1.19.6 A list of Tools & Tackles (reference list at annexure-S) that the tenderer is having & those which will be deployed on this job as per Performa as per Annexure-F.

1.19.7 An attested copy of the Power of Attorney, in case an individual other than the sole Proprietor signs the tender.

1.19.8 Declaration sheet as per preform at Annexure - G.
Certificate of No-Deviation (Technical) at Annexure-H.
Certificate of No-Deviation (Commercial) at Annexure-I



Certificate conforming knowledge about site condition at Annexure-J.

1.20 **Note:** All the data required to be enclosed with the tender as per the requirements of this section need to be furnished neatly typed, signed and stamped in the given formats only & wherever necessary documentary proof also needs to be enclosed. In the absence of the above information the tender may be considered as incomplete and may lead to rejection.

1.21 The offer shall be kept open for acceptance for a period of 08 months from the date of opening of techno-commercial offer. In case Bharat Heavy Electricals Limited calls for negotiations, such negotiations shall not amount to cancellation or withdrawal of the original offer, which shall be binding, on the tenderer. All expenses for attending such negotiations are to be borne by the tenderer.

1.22 The acceptance of Tender will rest with BHEL which does not bind itself to accept the lowest tender or any tender and reserves to itself full rights to reject any or all the tenders.

1.23 The tenderers are required to quote for the complete scope of work with the lowest possible rate. The tenderers quoting for part of the work or incomplete in any respect are likely to be rejected. **The work tendered out is indivisible in nature and the same shall be awarded to a single party.**

1.24 Conditional and unsigned tenders, tenders containing absurd or unworkable rates and amounts, tenders which are incomplete or otherwise considered defective and tenders not in accordance with the tender conditions, specifications, etc., are liable to be rejected.

1.25 If a tenderer expires after the submission of his tender or after the acceptance of his tender, BHEL may at its discretion, cancel such tender. If a partner of a firm expires after the submission of the tender or after the acceptance of the tender, BHEL may cancel such tender at its discretion unless the firm retains its character.

1.26 BHEL will not be bound by any Power of Attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. BHEL may, however, recognize such Power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.

1.27 If the tenderer deliberately gives wrong information in his tender, BHEL reserves the right to reject such tender at any stage or to cancel the contract, if awarded and forfeit the Earnest Money / Security Deposit / any other moneys due.

1.28 Canvassing in any form in connection with the tender is strictly prohibited and the tenders submitted by the Contractor who resorts to canvassing are liable to be rejected.



Part-1: Technical Bid

Section 1: INSTRUCTIONS TO BIDDERS

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1.29 Tenderer black listed by any BHEL unit/ region or by customer shall not be considered for technical evaluation. During Execution of any unit of customer, BHEL or customer, issue show cause notice to tenderer or blacklist it ,then BHEL has right to short close the tender at tenderer risk and cost.

1.30 Tenderer shall also provide the list of employees along with their certified past experiences with their degree, diploma and ITI certificates as required by the tender.

1.31 Tenderer shall also provide the list of Tools & Tackles that the tenderer is having & those which will be deployed on this job as per Performa as per Annexure-'F' along with their name of manufacture. Calibration certificates should also be provided for measuring equipment

1.32 Should a tenderer or, in the case of a firm or Company, its Partner(s) / major shareholder(s) / Director(s) have relation(s) employed in BHEL, the authority inviting tender shall be informed of the fact along with the offer. Otherwise, BHEL may at its sole discretion, reject the tender or cancel the contract and forfeit the Earnest Money / Security Deposit.

1.33 If any of the above conditions are not fulfilled by the tenderer BHEL has the right to reject or short close the tender at tenderer risk and cost.

1.34 BHEL reserves the right to accept or reject any of the bid / all bids with or without deviation or cancel / withdraw the invitation for bid without assigning any reason whatsoever and in such case no bidder shall have any claim arising out of such action by BHEL.

1.35 The offers of the tenderers who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected.

1.36 The list of banned firms is available on BHEL web site
http://www.bhel.com/index.php/latest_tenders

1.37 Wherever required, additional sheets may be used



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REF: NIT No. ESH/TONS/UNIT#3/T-01

Part-1: Technical Bid

Section 2: GENERAL TERMS & CONDITIONS

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PART – 1

Section 2 : GENERAL TERMS AND CONDITIONS



External Services Hydro, BHEL Bhopal

2.1 **DEFINITIONS:** The following terms and expressions shall have the meaning hereby assigned to them except where the context otherwise requires.

2.1.1 **'BHEL'** shall mean Bharat Heavy Electricals Limited, a Company registered under the Indian Companies Act, 1956 with its Registered Office at BHEL House, Siri Fort, New Delhi, Pin-110049 through its office at Piplani, Bhopal – 462022 or its authorized Officers or its Engineers or other employees authorized to deal with any matters with which these persons are concerned on its behalf.

2.1.2 **'CLIENT' or 'CUSTOMER'** shall mean the project authorities to whom BHEL is supplying the equipment & providing the services. In this case it is Madhya Pradesh power generating Company Limited. (MPPGCL), Madhya Pradesh (India).

2.1.3 **'CONTRACTOR'** shall mean the individual, firm or Company who enters into contract with BHEL for providing the services as per this Tender and shall include their executors, administrators, and successors and permitted assigns.

2.1.4 **'CONTRACT' or 'CONTRACT DOCUMENT'** shall mean and include the agreement, the work order, the accepted appendices of rates, schedules of quantities, if any, General Terms & Conditions of the Contract, Special Conditions of the contract, Instructions to Tenderers, drawings, technical specifications, the special specifications, if any, & the Letter of Intent / acceptance letter issued by BHEL. Any conditions or terms stipulated by the tenderer in the tender documents or subsequent letters shall not form part of the contract unless specifically accepted in writing by BHEL in the letter of intent and incorporated in the Work Order.

2.1.5 **'TENDER DOCUMENTS'** shall mean the NIT, Instructions to Tenderers, General Conditions of Contract, Special Conditions, Price Schedule, Technical Specifications and Special Specification if any.

2.1.6 **'LETTER OF INTENT'** shall mean the intimation by a letter / telegram / mail/fax to the tenderer that the tender has been accepted in accordance with provision contained in that letter. The responsibility of the contractor commences from the date of issue of this letter and all the terms and conditions of contract are applicable from this date.

2.1.7 **'COMPLETION TIME'** shall mean the period specified in the Letter of Intent or date mutually agreed upon for completing the work / services stipulated in the work order to the satisfaction of the Site-In-Charge being of required standard and conforming to the specifications of the contract.

2.1.8 **'PLANT'** shall mean and connote the entire assembly of the plant and equipment is covered by the Contract.

2.1.9 **'EQUIPMENT'** shall mean all machinery, materials, structure, all electricals and other components of the plant covered by the contract.



2.1.10 **'TESTS'** shall mean and include such test or tests to be carried out by the contractor as are prescribed in the contract or considered necessary by BHEL in order to ascertain the quality, workmanship, performance and efficiency of the contracted work or part thereof.

2.1.11 **'APPROVED, DIRECTED or INSTRUCTED'** shall mean approved, directed or instructed by BHEL Engineer / Site Engineer / Project- in-charge/ Site-in-Charge.

2.1.12 **'WORK' or 'CONTRACT WORK'** shall mean and include the work to be done by the Contractor as specified in the Tender documents.

2.1.13 **'LAW GOVERNING THE CONTRACT AND COURT OF JURISDICTION'**

The contract shall be governed by the Law for the time being in force in the Republic of India. Subject to clause 2.27.1 or 2.27.2 of this contract. The Civil Court at Bhopal shall alone have exclusive jurisdiction in regard to all claims in respect of this Contract.

2.1.14 **'UNDER TAKING':** The tenderer shall give an undertaking under the official secret Act for maintaining secrecy of the tender documents, drawings or other records connected with the work given to him. The unsuccessful tenderer shall return all the drawings / documents given to them.

2.2 **ISSUE OF NOTICE :**

The Contractor shall furnish to the Site-In-Charge, the name designation and address of his authorized agent/ In-charge of Project and all complaints, notices, communications and references shall be deemed to have been duly given to the Contractor, if delivered to the Contractor or his authorized agent or left at or posted to the address either of the contractor or his authorized agent and shall be deemed to have been so given in the case of posting on the day on which they would have reached such address in the ordinary course of post or at which they were so delivered or left

2.3 **MATERIALS HANDLING AT SITE**

(INCLUDING STORAGE, LOADING, UNLOADING, HANDLING AND TRANSPORT): The contractor shall make all arrangements to load, unload, handle, transport and store all materials at site in proper manner (as approved by BHEL Site-In-Charge) so as to avoid contamination and deterioration. The contractor shall make own arrangement for T & Ps including cranes. For storage, open space shall be given by BHEL/ Customer and contractor shall make its own covered shed. The places at site where materials are to be stored shall be subject to the approval of the Site-in-charge. The store should have proper illumination, record keeping and locking arrangements for safe custody of the materials. The store should be made before arrival of the materials at site. Space required for stores may be conveyed during the offer stage.

2.4 **SUB-LETTING OF CONTRACT :**

The contractor may assign or sublet the contract or any substantial part thereof or any part of the plant to a party as per vendor list submitted along with the



offer, provided that any such arrangement shall not relieve the Contractor from any obligation, duty or responsibility under the contract. The Contractor shall submit its list of vendors for sourcing supplies / services along with the tender. BHEL may seek approval of the contractor and its sub-vendors from the customer and shall in turn give approval.

2.5

REJECTION OF BID:

The bid of the contractor may be rejected either

- for not meeting the qualifying criteria or
- due to unsatisfactory performance in the past at any of the BHEL units or BHEL run sites or
- due to rejection of the contractor by the customer.

2.6

CONTRACT QUALITY ASSURANCE AND QUALITY PLAN:

The contractor shall submit a quality assurance program containing the quality management and procedures that are proposed to be followed in the performance of the works during various phases. The quality assurance programs to be followed for the execution of the contract will be mutually discussed and agreed.

Within an agreed scheduled period after the LOI, the contractor shall submit a quality plan, detailing out the specific quality control procedure to be adopted for controlling the quality characteristics relevant to major activities to be undertaken. BHEL/ Customer will approve the plan identifying the "customer hold points" for inspection. During the inspection, in case the materials are rejected, it shall be the responsibility of the contractor to furnish approved materials. The contractor shall be fully responsible for the proper execution of all quality plans and shall also perform all quality control activities, inspection and tests agreed with BHEL/ Customer to demonstrate full compliance with the specification requirements. BHEL/ Customer shall witness test/inspection, etc as per the "customer hold points" indicated in the quality plans.

2.7

EARNEST MONEY:

2.7.1

EMD is to be paid by tenderers for securing fulfilment of any obligation in terms of the NIT. Every tender must be accompanied by the prescribed amount of Earnest Money Deposit in full, in any one of the following form:

- Cash deposit as permissible under the extant income Tax Act (before tender opening)
- Electronic Fund transfer credited in BHEL account (before tender opening). EFT credit receipt to be enclosed with tender
- Banker's cheque / pay order/ Demand draft, infavour of BHEL (along with offer)
- Fixed deposit receipt (FDR) issued by scheduled banks/ public financial institutions as defined in the companies Act (FDR should be in the name of the contractor , a/c BHEL).

Tenders received without EFT receipt of fully paid Earnest Money or not in the manner prescribed above will not be considered.



2.7.2 The Earnest Money Deposit of the successful tenderer will be retained towards part of Security Deposit.

2.7.3 In the case of unsuccessful tenderer, the Earnest Money will be refunded after finalization of the tender.

2.7.4 **FORFEITURE OF EMD:** EMD paid by the tenderer will be forfeited as per NIT condition if:

- After opening the offer and within the offer validity period the tenderer revokes his tender or makes any modification to his tender which is not acceptable to BHEL.
- The contractor fails to deposit the required security deposit or commence the work within the period as per LOI / contract.
- EMD by the tenderer shall be withheld in case any tenderer is envisaged under the provisions of extant “Guidelines on suspension of Business suppliers/contractors” and forfeited/released based on the action as determined under these guidelines

2.7.5 EMD given by all unsuccessful tenderers shall be refunded normally within 15 days of award of work.

2.7.6 EMD shall not carry any interest.

2.7.7 EMD of successful tender shall be retained as a part of security deposit.

2.8 **SECURITY DEPOSIT**

2.8.1 Security deposit means the security provided by the contractor towards the fulfilment of any obligation in terms of the provision of the contract. Upon acceptance of tender, the successful tenderer must deposit the required amount of security deposit, after adjusting the amount of Earnest Money duly deposited with the Tender, within the time specified in the letter of intent for satisfactory completion of work.

2.8.2 The total amount of Security Deposit shall be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.

2.8.3 The balance amount to make up the required Security Deposit of 5% of the contract value may be accepted in the following forms:

2.8.3.1 Electronic Fund Transfer in favour of BHEL

2.8.3.2 Bank Guarantee from Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The Bank Guarantee in the prescribed proforma as per annexure-B of general terms and condition from any one of consortium bank listed in annexure-C of general terms and condition.

2.8.3.4 Fixed Deposit Receipt issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL)



2.8.3.5 Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL)

2.8.4 (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)

2.8.5 Security Deposit shall be released to the Contractor upon fulfilment of contractual obligations as per terms of the contract.

2.8.6 At least 50% of the required Security Deposit, including the EMD, should be collected before start of the work. Balance of the Security Deposit can be collected by deducting 10% of the gross amount progressively from each of the running bills of the Contractor till the total amount of the required Security Deposit is collected.

2.8.7 If the value of work done at any time exceeds the contract value, the amount of Security Deposit shall be correspondingly enhanced and the additional Security Deposit shall be immediately deposited by the Contractor or recovered from payment/s due to the Contractor.

2.8.8 The recoveries made from running bills (cash deduction towards balance SD amount) can be released against submission of equivalent Bank Guarantee in acceptable form, but only once, before completion of work.

2.8.9 The Security Deposit shall not carry any interest

2.8.10 Security Deposit will be held including bank Guarantee till the end of warranty period plus 03 months. Validity of the Bank Guarantee furnished towards Security Deposit under clause 10.1 e) above, should be valid up to the period of completion of warranty period as stipulated in the Letter of Intent/ WO, plus 03 months claim period and the same will be kept valid by proper renewal till the satisfactory completion of the warranty period.

2.8.11 It shall be the responsibility of the contractor to ensure Extension of BG as and when required and shall be submitted before 15 days of its expiry date. On failure to do so necessary action as deemed fit shall be initiated.

2.8.12 Failure to deposit the Security Deposit within the stipulated time may lead to forfeiture of Earnest Money and cancellation of the award of work. BHEL reserves the right of forfeiture of Security Deposit in addition to other claims and penalties in the event of the Contractor's failure to fulfil any of the contractual obligations or in the event of termination of contract as per terms and conditions of contract. BHEL reserves the right to set off the Security Deposit, against any claims of any other contracts with BHEL.

2.8.13 Refund of security deposit: Security deposits will be released only after the Warranty period is over. In case contractor wants refund of total security money deposited by him along with final bill, the contractor will have to submit



absolute "No Demand Certificate" in the prescribed form and returns properties belonging to BHEL/ customer taken, borrowed or hired by him for carrying out the said works and produce a BG of an amount equivalent to 100% of the total security deposit at the time of final bill on successful completion of trial run with validity up to the expiry of Warrantee period + 3 months claim period.

2.9

COMMENCEMENT & COMPLETION OF WORK :

The contractor shall commence the work within the time indicated in the Letter of Intent and shall proceed with the same with due expedition without delay. No mobilization charges of any kind are payable.

2.9.1

At the time of mobilisation of work at site, the contractor is required to submit the copies of following documents to Site-In-Charge for verification:

- a. BG to be submitted through Structured Financial Messaging System (S.F.M.S).
- b. Contract Agreement
- c. Indemnity Bond
- d. EPF registration
- e. Valid Test Certificates for the Plant & Machinery being deployed at site.
- f. Valid Insurance Policy covering third party liability, workmen compensation & tool & tackles brought to site.
- g. Proper Labour License.
- h. Work force deployment schedule for posting to site.
- i. Detail work schedule (L-3 network).

2.9.2

If the successful tenderer fails to commence the work within the stipulated time, BHEL at its sole discretion will have the right to cancel the contract.

2.9.2.1

The Earnest money and / or Security Deposit will stand forfeited without any further reference to the Contractor without prejudice to any of BHEL's other rights and remedies in this regard

2.9.3

All the works shall be carried out under the direction and to the satisfaction of BHEL.

2.9.4

The transported equipment, erected/constructed plant or work performed under the contract, as the case may be, shall be taken over by BHEL/customer when it has been completed in all respects and / or satisfactorily put into operation & site is made clear

2.10

WORK EXECUTION & SCHEDEULE:

2.10.1

The Contractor is responsible for the correct execution of the work in accordance with the scopes/drawings provided to him. The levels, measures and other information concerning the existing site as shown on the drawings or as described are supposed to be correct but the contractor shall verify them for himself and no extra claim, whatsoever shall be entertained on account of any discrepancy or omission in such matters or on account of the description turning out to be different from what was expected.



2.10.2 In case the contractor requires any clarifications, conditions, drawings etc., the Site-In-charge shall be contacted.

2.10.3 The contractor will be required to submit detail work schedule before start of work, and he shall submit a Bar chart/PERT Chart/CPM to the Site-in-charge indicating how the contractor proposes to complete the work within the stipulated time as per the contract. This Bar Chart /Pert Chart / CPM should clearly indicate the various activities in the proper sequence of construction. Once this program of construction has been submitted by the contractor and approved by the Site-in-charge, the contractor shall follow the detailed work schedule, organize labor / material to suit the completion period of work & abide by the approved construction program with the progress indicated in the chart. The detailed work schedule shall be organised to suit the completion period of work within the shutdown given by the customer.

2.10.4 The work under the contract will be deemed to be completed in all respect, only when the trial runs, testing and commissioning including trial operation are completed. The contractor shall obtain no dues from concerned BHEL / Customer department.

2.10.5 On final completion of work, the contractor shall submit the completion report and obtain approval from BHEL.

2.10.6 The entire schedule as approved shall be strictly followed by contractor. If delay is for any reason beyond the control of the contractor, then the contractor shall bring it to the notice of engineer in charge.

2.11 **INTEREST CHARGES:**
No interest shall be payable by BHEL on Earnest Money, Security Deposit / or on any money due to the Contractor by BHEL.

2.12 **DRAWINGS & DOCUMENTS:**
Relevant drawings & documents available at project shall be provided to successful bidder during execution of the work. If some relevant drawings/documents of some assemblies are not available (being old project), R&M work to be carried out as per instruction of BHEL site in-charge.

2.13 **METHOD OF WORKMANSHIP**

2.13.1 All work shall be performed in a first class, neat and good workmanship manner by technical staff skilled in the trade involved.

2.13.2 The installation shall be carried out in such a manner as to preserve access to other equipment installed.

2.14 **INSPECTION & TESTING AT CONTRACTOR's WORKS**

2.14.1 BHEL / customer shall within 10 days from the date of offsite inspection for the work/equipment give a notice in writing to contractor of any objection. The contractor shall give due consideration to such objection and shall either make



the modifications that may be necessary to meet the said objections or shall confirm in writing to BHEL / customer giving reasons therein that no modifications are necessary to comply with the contract.

2.14.2 BHEL / customer shall have access to the contractors/sub-contractor's premises or work and shall have the power at all reasonable time, to inspect any portion of the work being carried out or equipment or examine the materials and workmanship of the equipment's being manufactured in other premises of the contractor/sub-contractor.

2.14.3 In all cases where the tests whether at premises or works of the contractor or of any sub -contractor are to be conducted, the contractor/sub-contractor, shall provide free of charges such labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by BHEL / customer or his authorised representative to carry out effectively such test of the equipment in accordance with contract and shall give facilities to BHEL / customer or to his authorized representative to accomplish testing.

2.15 PROGRESS REPORT & FIELD OFFICE RECORD

2.15.1 The contractor shall prepare and submit daily progress report / charts, manpower deployment, material receipt report and such other reports as required by the Site-In-Charge for the monitoring and smooth progress of work. Progress report should explicitly indicate progress achieved against the targets, reasons for delay and action plan to compensate for such delay.

2.15.2 The contractor shall maintain records pertaining to the quality of work and inspection and testing compliance with all technical requirements. Where safety of work is involved, the contractor shall submit written procedure to the Site-In-Charge

2.16 MEASUREMENT OF WORK

2.16.1 Before taking any measurement of any work, the Site-In-Charge or a subordinate deputed by him shall give reasonable notice to the contractor. If the contractor fails to attend at the measurements after such notice or fails to countersign or to record the difference within a week from the date of measurement in the manner required by the Site-In-Charge then in such event the measurements taken by the Site-In-Charge or by the subordinate deputed by him shall be final and binding on the contractor and the contractor shall have no right to dispute the same.

2.16.2 For progressive/running bill payments, the contractor shall present detailed measurement sheets in triplicate duly indicating all relevant details based on technical documents and connected drawings for work done during the month / period under different categories in line with terms of payment as per letter of intent. The basis of arriving at the quantities / weight shall be the relevant documents and drawings released by BHEL. These measurement sheets shall be prepared jointly with Site-In-Charge and signed by both the parties.



2.16.3 These measurement sheets will be checked by the Site-In-Charge and quantities and percentage eligible for payment under different groups shall be decided by him. The abstract of quantities and percentage so arrived at based on the terms of payment shall be entered in the measurement book and signed by both the parties.

2.16.4 Based on the above quantities the contractor shall prepare the bills in the prescribed proforma and work out the financial value. These will be entered in the Measurement Book and signed by both the parties. Payment shall be made by BHEL after effecting the recoveries due from the contractor.

2.16.5 All recoveries due from the contractor for the month / period shall be effected in full from corresponding running bills unless specific approval from competent authority is obtained to the contrary.

2.16.6 Measurement shall be restricted to that quantity for which it is required to ascertain the financial liability of BHEL under this contract.

2.16.7 Measurements shall be taken jointly by persons duly authorised by BHEL and the contractor.

2.16.8 Passing of bills covered by such measurement does not amount to acceptance of the completion of the work measured by BHEL. Any left out work has to be completed by the contractor, as directed.

2.16.9 Final measurement and bill shall be prepared in the Performa prescribed for the purpose, based on the certificate issued by the Site-In-Charge that the entire work as stipulated in the tender specification has been completed in all respect to the entire satisfaction of BHEL. The contractor shall give unqualified '**NO CLAIM AND NO DEMAND CERTIFICATES**'. All the tools and tackles loaned to him should be returned in satisfactory condition to BHEL. The abstract of final quantities and financial values shall also be entered in the Measurement Book and signed by both parties. The final bill shall be paid within a reasonable time after the completion of the work.

2.17 **RIGHTS OF BHEL**

2.17.1 BHEL reserves to itself the following rights in respect of this Contract without entitling the Contractor to any compensation as below:

2.17.2 To get the work done through another agency at the risk and cost of Contractor, in the event of Contractor not starting the work in time, poor progress of work, inability to get the work done, delay in completion of Contract, poor quality of work, persistent disregard of instructions of BHEL, assignment transfer, or subletting of the contracted work without written permission of BHEL, non-fulfilment of any contractual obligations etc. and to claim / recover compensation for such losses from the contractor including BHEL's supervision charges and overheads from Security Deposit / other dues in addition to any other action that may be taken. However, BHEL shall notify such action.



2.17.3 To withdraw any portion of work and/or to restrict / alter quantum of work as indicated in the contract during the progress of work and get it done through another agency and / or by the departmental staff to suit BHEL's commitments to its Customer.

2.17.4 To terminate the contract after due notice and forfeit the Security Deposit and recover the loss sustained in getting the balance work done through other agencies in addition to liquidated damages in the event of:

2.17.4.1 Contractor's continued poor progress. Withdrawal from or abandonment of the work before completion of the work.

2.17.4.2 Corrupt act of the contractor.

2.17.4.3 Insolvency of the contractor. Persistent disregard of the instructions of BHEL.

2.17.4.4 Assignment Transfer, Subletting of the contract work without BHEL's written permission.

2.17.4.5 Non-fulfilment of any contractual obligations or obligations under the law. To recover any money due from the Contractor from out of any money due to the Contractor under this or any other Contract or from the Security Deposit.

2.17.5 To claim penalty or compensation for losses sustained including BHEL's supervision charges and overheads in case of termination of contract or negligence of work by the contractor and/or to levy liquidated damages for delay in completion of work.

2.17.6 To determine the Contract or to restrict the quantum of work and pay for the portion of work done in case BHEL's contract with its customer is terminated for any reason.

2.17.7 To effect recoveries from any amounts due to the contractor under this or any other contract or in any other from the moneys which BHEL is forced to pay to anybody due to contractor's failure to fulfil any of his obligations.

2.17.8 To restrict or increase the nature of work to suit site requirements, since the tender specification is based on preliminary documents and quantities furnished therein are indicative and approximate. The rates quoted shall not be subjected to revision by the contractor in such case.

2.17.9 To deploy BHEL's skilled and/or semi-skilled workmen in case of emergency / poor progress / deficiency in skill on the part of the employees of the contractor and to recover the expenditure on account of the same from the money due to the contractor.

2.17.10 The Site-In-Charge shall have full powers to acquire the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default the Site-In-Charge shall be at liberty to employ other persons to remove the same without being answerable or accountable for any loss or damage that may happen to arise to such materials.



The Site-In-Charge shall have full powers to ask for other proper materials to be substituted thereof and in case of default the Site-In-Charge may ask the same to be supplied and all costs which may arise due to such removal and substitution are to be borne by the contractor.

2.17.11 While every endeavour will be made by BHEL to this end, BHEL cannot guarantee uninterrupted work due to conditions beyond its control. The contractor will not be entitled to any compensation / extra payment on this account.

2.17.12 In the event of any dispute of technical nature, the decision of BHEL and / or Site-In-Charge shall be final and binding on the Contractor.

2.18 **RESPONSIBILITIES OF THE CONTRACTOR
IN RESPECT OF LOCAL LAWS, EMPLOYMENT OF WORKERS ETC**

2.18.1 The contractor should follow the prevailing industrial / labor laws as amended from time to time and shall also take all safety measures required during the execution of this order.

2.18.2 The Contractor shall be fully responsible for correctness & quality of his work to the entire satisfaction of BHEL / Customer. The work shall be executed in accordance with the directions, instructions, drawings and specification. The work shall be performed in a first class, neat and good workmanship manner by technical staff skilled in the trade involved. The installation shall be carried out in such a manner as to preserve access to other equipment installed. If during the progress of manufacture or supply of plant, BHEL/customer notifies in writing to the contractor that the contractor has installed/manufactured any plant or part of plant unsound or imperfect, or has supplied any plant inferior in quality to that specified, the contractor on receiving details of such defects or deficiency, shall at his own expenses, within such time as may be reasonably necessary for the purpose, alter, reconstruct or remove such plant or part of plant or supply fresh materials as per standard specification and in case the contractor fails to do so, BHEL may on giving the contractor **thirty days'** notice in writing of his intention to do so, proceed to alter, reconstruct or remove such plants or part of plants at the contractor's cost provided that nothing in this clause shall be deemed to deprive BHEL/ customer or affect any rights which he may otherwise have in respect of such defect or deficiencies and provided that such replacement shall be carried out by BHEL/ customer within a reasonable time and at a reasonable price and as far as possible, to the same specification and under competitive conditions.

2.18.3 If the completed plant or any portion taken over is found to be defective or fails to fulfil the requirement of the contract, the Site-In-Charge shall forthwith give the contractor notice setting forth particulars of defects or failure and the contractor shall make the defects good, or alter the same to make it comply with the requirements of contract. If the contractor fails to do so, within a reasonable time, BHEL/Customer may reject and replace at the cost of the contractor, the whole or any portion of the plant, as the case may be, which is



defective or fails to fulfil the requirement of the contract. In case of such replacement by BHEL, contractor shall be liable to pay to BHEL the extra cost, if any of such replacement delivered and/or erected as provided for in the original contract. Such extra cost and the damages being the ascertained difference between the prices paid by BHEL/Customer, under the provision above mentioned for such replacement and the contract price for the plant so replaced and also to repay any sum paid by BHEL/Customer to the contractor in respect of such defective plant.

2.18.4 If in the opinion of the contractor any work is insufficiently specified or required modifications, the Contractor shall refer the same in writing to the Site-In-Charge and obtain his instruction / approval in writing before proceeding with the work. If contractor fails to refer such instance, any excuse for faulty erection, for poor workmanship or delay in completion shall not be entertained.

2.18.5 Land belonging to BHEL or its customer under temporary possession of BHEL shall not be occupied by the contractor without the written permission of BHEL.

2.18.6 The old plant and equipment, which are being replaced by new plant and equipment will be the property of the customer. The customer shall provide space or store for storing the dismantled plant and equipment within the plant premises. The contractor shall stack the dismantled material properly.

2.18.7 The Contractor will be required to sign a contract with BHEL on Non-judicial stamp paper as per **Annexure – “A”** of General Terms & Conditions. The cost towards agreement shall be borne by the contractor.

2.18.8 All the properties/equipment/components of BHEL/its customer loaned with or without deposit, to the contractor shall remain the properties of BHEL/ its customer. The contractor shall use such properties for the purpose of execution of this contract. The contractor shall return them in good conditions as and when required by BHEL/its customer. In case of non-return, loss, damaged, repairs, etc., cost thereof, as may be fixed by the Site-In-Charge, will be recovered from the contractor.

2.18.9 **It shall not be obligatory on the part of BHEL/ customer to supply any tools and tackles.** Contractor has to arrange the testing equipment's as per annexure –“S” required to complete all the tests mentioned in NIT and required for successful commissioning of the machine. No instruments will be provided by Customer and BHEL, only 415V, 3φ AC supply will be made available by customer at site.

2.18.10 **ROYALTY**
Royalty for equipment supplied shall be borne by the contractor and nothing extra on this account shall be paid to him by BHEL.

2.18.11 **PERMANENT BENCH MARKS**
Where directed by the Site-In-Charge, the contractor shall provide permanent bench marks. Likewise, any other levels or lines or points specifically required



by the Site-In-Charge shall be built in. The contractor shall carefully protect and preserve such important mark during execution of the work.

2.18.12

SITE TESTING

For the tests carried out by the contractor at site, the contractor shall install testing equipment at site as per annexure- "S" of NIT and shall ensure and certify the calibration of the equipment so installed and shall maintain the same in working order throughout the period of construction. The contractor shall also provide the necessary trained staff for carrying out such tests and using such equipment. List of equipment's with range shall be submitted by the bidder.

2.18.13

APPROVAL OF LOCAL MATERIALS FOR USE

Before bringing any material (locally purchased) to site in bulk for civil works, infrastructure, plant services, etc, contractor shall have to bring a sample first and get it approved by Site-In-Charge. Any material brought to site in contravention of this conditions shall be rejected forthwith and no payments shall be made.

2.18.14

COMPENSATION

For all works having contract value of Rs. 5,00,000/- or above, BHEL shall recover the amount of compensation paid to victim(s) by BHEL towards loss of life/ permanent disability due to an accident which is attributable to the negligence of contractor, agency or firm or any of its employees as detailed below.

- a) Victim: Any person who suffers permanent disablement or dies in an accident as defined below.
- b) Accident: Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious occurrence caused during the manufacturing/ operation and works incidental thereto at BHEL factories/ offices and precincts thereof, project execution, erection and commissioning, services, repairs and maintenance, trouble shooting, serving, overhaul, renovation and retrofitting, trial operation, performance guarantee testing undertaken by the company or during any works/ during working at BHEL Units/ Offices/ townships and premises/ Project Sites.
- c) Compensation in respect of each of the victims:
 - i. In the event of death or **permanent disability** resulting from Loss of both limbs: Rs. 10,00,000/- (Rs. Ten Lakh).
 - ii. In the event of **other permanent disability**: Rs.7,00,000/- (Rs. Seven Lakh)
- d) Permanent Disablement: A disablement that is classified as a permanent total disablement under the provision to section 2 (I) of the Employee's Compensation Act, 1923.

2.18.15

The contractor shall not claim any compensation due to reduction in the scope of work due to changes in design, which curtail the quantum of work.



2.18.16 The contractor shall fully indemnify BHEL/its customer against all claims of whatever nature arising during the course of execution of this contract due to the acts of contractor/his personnel.

2.18.17 In the event of any claim or demand being made or action being brought against BHEL/Customer for infringement or alleged infringement of letter, patent in respect of any machine plant, work or thing used or supplied by the contractor under this contract or in respect of any method of using or working by BHEL/Customer of such machines, plant, work or thing, the contractor will indemnify BHEL/Customer against such claim or demand and all costs and expenses arising from or incurred by reason of such claim or demand. In case the equipment in such suit or proceedings is held to constitute infringement and the use of the equipment or part is prohibited, the contractor shall at his own expenses either procure for BHEL/Customer the right to continue using the equipment, modified it so as it becomes non-infringing or remove the equipment and refund BHEL/Customer price plus the transportation and installation cost thereof.

2.18.18 The contractor shall ensure that no damage is caused to any person / any existence work/property of customer/other parties working at site. If any such damage is caused, it shall be the responsibility of the contractor to make good the losses and compensate the affected parties at his own cost. The contractor shall indemnify BHEL for any such eventuality in the prescribed proforma as per Annexure "Q" of General Terms & conditions.

2.18.19 Any delay in completion of work or non-achievement of periodical targets due to reasons attributable to the contractor, will have to be compensated by the contractor either by increased manpower and resources or by working extra hours or more than one shift at no extra cost to BHEL.

2.18.20 The contractor shall execute the work under the conditions usual to such power plant construction and in conjunction with numerous other operations at site. The contractor and his personnel shall co-operate and co-ordinate with other agencies at project site and proceed in a manner that shall help in the progress of work at site as a whole.

2.18.21 The contractor shall keep the area of work clean and shall remove the debris etc. while executing day-to day work. Upon completion of work, the contractor shall remove from the vicinity of work, all scrap, packing materials, rubbish, unused and other materials and deposit them in places specified by the Site-In-Charge. The Contractor shall also demolish all the hutment's sheds, offices, etc. constructed and used by him and shall clean the debris. In the event of his failure to do so, the same will be arranged to be done by the Site-In-Charge and the expenses for the same shall be recovered from the contractor.

2.18.22 The contractor shall execute the work in the most professional manner in the stipulated time. Accuracy of work and timely execution shall be the essence of



this contract. The contractor shall be responsible to ensure that the quality, assembly and workmanship conform to the dimensions and clearance given in the drawings and/or as per the instructions of the Site-In-Charge.

2.18.23 Establishment of Site Office – Contractor shall make its own office at site. He will be required to maintain good office at site with necessary staff & infrastructure like mobile phone, Computer System with Printer, UPS and internet. Contractor shall extend all office facility and infrastructure for BHEL / Customer official use.

2.18.24 The contractor under this contract shall also provide free of cost service of highly skilled/ skilled persons during the period of contract exclusively for use by BHEL. This manpower will be required for following services;

- One no highly skilled worker (Qualified computer operations) for office and stores work and for maintaining the documentation and records (films/ movies / photographs) from site opening to handing over of machine
- One no Skilled worker for office & store use and distribution of docks and xeroxing the document at site.

2.18.25 In case there is no specification laid down in the contract for a class of work, such work shall be carried out in accordance with the standard practice and instructions, and of the Site-In-Charge.

2.18.26 No levy, payment or charge made or imposed shall be impeached by reason of any clerical error or by reason of any mistake in the amount levied, demanded if charged.

2.18.27 The contractor shall take all reasonable care to protect the materials and the work till such time the plant/equipment has been taken over by BHEL/its customer. It will be the responsibility of the contractor to ensure safe lifting of the equipment to avoid damages/accidents.

2.18.28 Contractor shall not stop work or abandon the site for whatsoever reason or dispute, excepting for force majeure conditions. All problems/dispute shall be separately discussed and settled without affecting the progress of work, stoppage or abandonment of work, other than under force majeure conditions, shall be treated as breach of contract and dealt with accordingly.

2.18.29 OBSERVING LOCAL LAWS, PROVIDING WORKMEN & SUPERVISORY PERSONNEL

The following are the responsibilities of the contractor in respect of observance of local laws, employment of personnel, payment of taxes etc:

2.18.29.1 The contractor shall engage sufficient staff to maintain the required rate of progress and quality of workmanship. If unskilled workers are required to be engaged, the same shall be engaged, as far as possible, from local areas in which the work is being executed. Claim for idle labour/machinery due to non-supply of any material by BHEL or for any other reasons will not be entertained.



During the continuance of this contract, the contractor shall have due regard to all local festival, religious events and other customs, in all his dealings with the local labour for the time being employed on or in connection with the work.

2.18.29.2 The Contractor shall comply with all local, state and central laws, statutory rules, Regulations, etc., such as: the payment of wages Act, the Minimum Wages Act, The Workmen's Compensation Act, The Employer's Liability Act, The Industrial Disputes Act, The Employees Provident Fund Act, Employees State Insurance Scheme, The Contract labour (Regulations and Abolition) Act, 1970 and other Acts, Rules and Regulations for labour as may be enacted by the Government during the tender of the Contract and having force or jurisdiction at site. The contractor will be required to seek registration, if required, as per local laws. The contractor shall give to the local governing body, police and other concerned project site authorities all such notice (s) as may be required under law.

2.18.29.3 The Contractor shall obtain independent license under the Contract Labour (Regulations and Abolition) Act, 1970 and its amendments from the concerned authorities based on the certificate (Form V) issued by the Principal employer / customer.

2.18.29.4 The contractor shall pay all taxes, fees, license charges which may be him or otherwise as deemed fit.

2.18.29.5 The contractor shall make all arrangements and shall also meet all expenses in connection with his workmen's qualification / re-qualification test(s) etc at site.

2.18.29.6 All safety rules and codes are applicable to work shall be followed without any exception

2.18.29.7 The contractor shall arrange to provide guards and prominently display caution notices, in unsafe and hazardous area.

2.18.29.8 The contractor shall be responsible for the provision of health and sanitary as described arrangements in the contract labour Regulations and Abolition Act, 1970 and its amendments.

2.18.29.9 The contractor shall be responsible for safety precautions as may be required for safe and satisfactory execution of the contract.

2.18.29.10 All safety rules and codes applied by BHEL/its customer at site shall be observed by the contractor and his workmen without exception. The contractor shall be responsible for the safety of the equipment/material and work to be performed by him and shall maintain all lights, fencing guards, signs etc. or other protections necessary for the purpose. Contractor shall also take such additional precautions as may be indicated from time to time by the Site-In-Charge, with a view to prevent pilferage, accidents, fire hazards etc. Suitable number of clerical staff, watch and ward staff & storekeepers to take care of equipment, material, construction tools and tackles shall be posted at site by the contractor till the completion of the work. The contractor shall arrange for



such safety devices as are necessary for this type of work and carryout the requisite site test of handling equipment, lifting tools, tackles etc. as per usual standards and practices.

2.18.29. **11** The contractor shall ensure proper accommodation including adequate medical facilities for the personnel employed by him. Customer on chargeable basis can extend these facilities to contractor during project tenure.

2.18.29. **12** The contractor will be directly responsible for payment of wages to his workmen. A pay-roll sheet giving details of all payments made to the workmen duly signed by the contractor's representative shall be furnished to BHEL for record purpose.

2.18.29. **13** No idle labour charges will be admissible in the event of any stoppage of work resulting in the contractor's workmen being rendered idle due to any reason at any time.

2.18.29. **14** The contractor shall furnish fortnightly labour deployment report indicating the classification and number of workmen engaged, date-wise and category-wise. Besides, the contractor shall also furnish progress reports on work at regular intervals as required by the Site-In-Charge.

2.18.29. **15** The contractor has to ensure that the people deployed by them restrict their movement in the area earmarked for the project. For movement in area other than earmarked for project prior permission of BHEL Site-In-Charge is required. The contractor shall abide by all the rules and regulations of the power station.

2.18.29. **16** Gate Pass for entry into power station would be required for all the persons deployed by the contractor at site. Special permission would be required for working beyond normal working hours. The contractor shall be arranging the passes and working permission beyond normal working hours on their own. BHEL Site-In-Charge shall provide necessary help and guidance for the same. Normal working hours in the plant is 8 hours.

2.18.29. **17** The Contractor shall deploy all skilled, semi-skilled and unskilled workers and should hold valid certificates wherever necessary. The contractor shall deploy only experienced supervisory staff to carry out the erection work and control his workmen. BHEL reserves the right to insist on removal of any employee of contractor. In the event of increasing or decreasing the category of workers, supervisors the contractor shall obtain the prior approval of BHEL's site-in-charge.

2.18.29. **18** The contractor will get Form-V from customer for obtaining labor license.

2.19 **STRIKES AND LOCKOUTS**

2.19.1 The contractor will be solely responsible for all disputes and other issues connected with his workmen. In the event of contractor's workmen resorting to strike or the contractor resorting to lockout and, if the strike or lockout so



declared is not settled within a period of one month, BHEL shall have the right to get the work executed employing its own men or through other agencies or both. The cost incurred by BHEL in this regard shall be recovered from the contractor.

2.19.2 For any purpose whatsoever, the employees of the contractor shall not be deemed to be in the employment of BHEL.

2.20 FORCE MAJEURE

2.20.1 Notwithstanding anything contained in the contract, neither BHEL nor the Contractor shall be held responsible for total or partial non-execution of any of the contractual obligations, should the obligation become unreasonably onerous or impossible due to occurrence of a 'Force Majeure' which directly affects the obligations to be performed by the BHEL or the contractor; Such events include war, military operations of any nature, blockages, revolutions, insurrections, riots, civil commotions, insurgency, sabotage, acts of public enemy, fires, explosion, epidemics, quarantine restrictions, floods, earthquake, or acts of God, restrictions by Govt. authorities; over which the BHEL or the contractor has no control.

The party claiming to be affected by force majeure shall notify the other party in writing without delay, within two weeks from the occurrence of such situation and on the cessation thereof. Extension of time sought by the contractor along with supporting evidence and so granted by BHEL for the work affected, if any, shall not be construed as waiver in respect of remaining execution. Rescheduling of execution on account of force majeure conditions, if so agreed by BHEL, will not entail the contractor to claim any increase in the price on whatsoever account.

2.20.2 Notwithstanding above provisions, BHEL shall reserve the right to cancel the Contract, wholly or partly, in order to meet the overall project schedule and make alternative arrangements. If deemed necessary, BHEL may takeover partly processed work at a mutually agreed price

2.21 SETTLEMENT OF DISPUTES

2.21.1 Except as otherwise specifically provided in the contract all disputes concerning questions of fact arising under the contract shall be decided by the Site-In-Charge subject to a written appeal by the contractor to the Site-In-Charge, whose decision shall be final to the parties hereto.

2.21.2 Any disputes or differences including those considered as such by only one of the parties arising out of or in connection with the contract shall be to the extent possible settled amicably between the parties.

2.21.3 If amicable settlement cannot be reached, then all disputed issues shall be settled by arbitration as provided in relevant clause.

2.22 ARBITRATION & CONCILIATION

2.22.1 ARBITRATION :



2.22.1.1 Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 2.27.2 herein below or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, commence arbitration in respect of such Dispute by issuance of a notice in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice'). The Notice shall contain the particulars of all claims to be referred to arbitration in sufficient detail and shall also indicate the monetary amount of such claim. The arbitration shall be conducted by a sole arbitrator to be appointed by the Head of the BHEL Bhopal unit issuing the Contract within 60 days of receipt of the complete Notice. The language of arbitration shall be English. The Arbitrator shall pass a reasoned award. Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder as in force from time to time shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Bhopal. The Contract shall be governed by and be construed as per provisions of the laws of India. Subject to this provision 2.27.1.1 regarding ARBITRATION, the principal civil court exercising ordinary civil jurisdiction over the area where the seat of arbitration is located shall have exclusive jurisdiction over any DISPUTE to the exclusion of any other court.

2.22.1.2 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018 as amended from time to time.

2.22.1.3 The cost of arbitration shall initially be borne equally by the Parties subject to the final allocation thereof as per the award/order passed by the Arbitrator.

Notwithstanding the existence of any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner unless the dispute inter-alia relates to cancellation, termination or short-closure of the Contract by BHEL.

2.22.2 CONCILIATION:

If at any time (whether before, during or after the arbitral or judicial



proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee (IEC) to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

Notes:

1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.
2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure 2.3 to this GCC. The Procedure 2.3 together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this GCC.

The Contractor hereby agrees that BHEL may make any amendments or modifications to the provisions stipulated in the Procedure 2.3 to this GCC from time to time and confirms that it shall be bound by such amended or modified provisions of the Procedure 2.3 with effect from the date as intimated by BHEL to it.

2.23

TAXES

Refer annexure-T for tax related compliance.



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Section 3: SPECIAL TERMS & CONDITIONS

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PART – 1

Section 3 : SPECIAL TERMS AND CONDITIONS



External Services Hydro, BHEL Bhopal

3.1 The Special terms and conditions given here supersede the relevant terms & conditions given in Instruction to tenderers and General Terms and Conditions.

3.2 **STRIKES AND LOCKOUTS:** The contractor will be solely responsible for all disputes and other issues connected with his workmen. In the event of contractor's workmen resorting to strike or the contractor resorting to lockout and, if the strike or lockout so declared is not settled within a period of one month, BHEL shall have the right to get the work executed employing its own men or through other agencies or both. The cost incurred by BHEL in this regard shall be recovered from the contractor.

3.3 **NO DEVIATION IN ANY OF THE TENDER TERMS SHALL BE ACCEPTABLE.**

3.4 This section of the tender defines the scope of the contractor's work other than as specified in the Technical Specifications. The requirement and conditions mentioned in this section are in addition to what are stated in "Instructions to Tenderers", "General terms and conditions" & "Technical Specifications".

3.5 **In case of any conflicting provisions given in different sections of the tender following shall be the order of preference forming the basis for arriving at a conclusion :**

- A) Description in schedule of quantities of price schedule**
- B) Technical Specifications**
- C) Special Conditions if any**
- D) Drawings**
- E) General terms & conditions**

3.6 The bidders are advised to take into account all factors and any fluctuations in the market rates etc. having effect on prices. No delay will be accepted and no claim will be entertained on this account after acceptance of the tender or during the currency of the contract. It is advisable that the bidders visit the site prior to bid submission.

3.7 **NATURE OF JOB:**

3.7.1 **The job tendered out comprises of refurbishment/rectification of generator and COH of generator & turbine of unit#3 by dismantling, rectification and assembly of necessary parts, erection, Testing & commissioning & other works of unit#3 at 3X105 MW, Tons hydroelectric project, Sirmour, (MPPGCL) in Madhya Pradesh.**

3.7.2 Bidders should visit the site at their own cost before submitting their offer and to make sure that they understand the working environment, present state of the structures, availability of original documents with our customer, local rules, laws and regulations etc. A certificate to this effect should be submitted by the bidder as per format given at Annexure "J".

NOTE: BHEL shall not accept any claim arising out of above factors.



3.8 **QUALIFYING CRITERIA:** The bidders should fulfil following qualifying criteria:

3.8.1 The bidder should have the experience of successful execution of erection of new hydro generator and hydro vertical francis or vertical Kaplan turbine not less than 60 MW in hydro power plant

or

Capital overhauling and R&M work of Hydro Generator and hydro Francis/Kaplan turbine of not less than 60 MW in hydro plant with complete rewinding of stator and refurbishment of generator and turbine, during last seven years ending on 31.08.2020

3.8.2 The bidder should have executed the work of above nature during last seven years ending on 31.08.2020 for valuing either of the following:

- a) Three works each valuing not less than Rs. 52.4 Lakhs
- b) Two works each valuing not less than Rs. 65.5 Lakhs
- c) One work valuing not less than Rs. 104.8 Lakhs

3.8.3 The bidder should have average annual financial turnover not less than Rs 39.3 Lakhs during the last 3 years, ending 31st March 2018-19.

Self-attested Audited Balance Sheet and P/L Account for last three years to be submitted in fulfilment of this criterion. CA certificates to be enclosed

3.8.4 The bidder shall not be black listed/ prohibited for doing business with any BHEL unit or M/s MPPGCL as on the date of submission of this tender.

3.8.5 Technical experience and financial resources of any subcontractor/subsidiary company / associate group shall not be taken into account in determining the Bidder's compliance with the qualifying criteria.

3.8.6 **The bid can be submitted by an individual party or a Joint Venture of not more than two parties. Necessary certificates and documents required for evaluation are required to be submitted in fulfilment of above criteria. (Details of Joint Venture are given under clause no. 3.26 below).**

3.8.7 BHEL is accredited to quality management system (ISO 9001: 2015). There by bidder has to successfully perform the work with quality standard / norms under BHEL guidance.

3.8.8 **Note: Apart from above documents, BHEL reserves the right to ask for additional documentary evidence for fulfilment of qualifying requirement of vendors.**

3.9 **OTHER INFORMATION TO BE SUBMITTED BY THE BIDDER:**

The bidder should submit following duly signed and stamped along with offer

3.9.1 No Deviation Certificate (Technical) as per Annexure "H" of Instruction to Tenderers.



3.9.2 No Deviation Certificate (Commercial) as per Annexure "I" of Instruction to Tenderers.

3.9.3 Copy of PAN No.

3.9.4 Copy of GST No.

3.9.5 An attested copy of the Power of Attorney, in case an individual other than the sole Proprietor / Director / Partner signs the tender.

3.9.6 Documents in support of type of firm.

3.9.7 Financial viability statement as per Annexure "C" of Instruction to Tenderers with supporting documents.

3.9.8 Certificate confirming knowledge about site condition as per Annexure "J" of Instruction to Tenderers.

3.9.9 Confirmation of participation in Reverse Auction Process as per "Annexure – K"

3.9.10 All other annexures attached with this tender

3.10 **SCOPE OF CONTRACTOR RELATED TO WORK, MAN POWER & ARRANGING TEST EQUIPMENTS FOR ALL THE TESTS AT SITE:**

3.10.1 Providing man power and special testing equipment / machine as per requirement of site.

3.10.2 Providing minimum work force at site along with necessary tooling and machine during the duration of work is the responsibility of the contractor.

3.10.3 **Brief scope of work is as follows :-**

3.10.3.1 Dismantling of Unit.

3.10.3.2 Rectification / Refurbishment/ overhauling work of generator.

3.10.3.3 Rectification / Refurbishment / overhauling work of turbine.

3.10.3.4 Trial assembly of major turbine components.

3.10.3.5 Final erection / Re-assembly work – turbine.

3.10.3.6 Final erection / Re-assembly work – generator

3.10.3.7 Box-up activities.

3.10.3.8 Pre-commissioning / mechanical spinning / commissioning, synchronisation of unit and handing over of the machine to customer after 72 hours of trial run

3.10.4 Test equipment's and T & P shall be in the contractor scope as per annexure- "S"

3.10.5 **Note:** -



**For detail scope of work, refer technical specification
ESH/TONS/UNIT#3/T-01/ Part-1: Section-4**

3.11 COMPLETION SCHEDULE:

3.11.1 On intimation by BHEL through Email or Fax for site opening, the contractor has to make initial mobilization of his materials, resources and workforce so as to commence the work within 15 (fifteen) days from intimation (since the work is to be done on priority/urgent basis). Further mobilisation of fresh resources and augmentation of existing resources shall be done in consultation with BHEL in all the area as covered in scope of work.

3.11.2 The total work under the scope should be completed within 8 months from the date of commencement of work (i.e. date of handing over of machine by customer to contractor till synchronisation and handing over machine to customer after 72 hours of successful operation of the machine).

3.11.3 **NOTE:** Completion time is the essence of the contract. Hence the contractor may be required to arrange working in extended working hours/ round the clock working to achieve scheduled completion time.

3.11.4 For working on extended hours/ Sundays/ holidays, a written permission has to be obtained from the customer well in advance.

3.12.0 PRICE SCHEDULE

3.12.1 Please refer to the Price Schedule. Price bid should be submitted strictly as per the enclosed price schedule. Any deviation w.r.t. price schedule is not acceptable and the offer having deviation is liable to be rejected. **Rates quoted by the bidder against schedule items shall remain firm.**

3.12.2 Price shall include all taxes/Duties/Royalties/Octroi/Freights applicable as on date of submission of tender except GST. Any new tax introduced in future shall be considered as applicable

3.12.3 GST shall be reimbursed to the contractor at actual at prevailing rate at the time of execution of work against documentary evidences.

3.12.4 No claim shall be admissible on account of revision in rate of existing taxes & duties (except GST) subsequent to bid submission. However, if any new taxes & duties are introduced subsequent to bid submission and during the currency of the contract including its extension if any for the reasons not attributable to the contractor, the same shall be reimbursed at actual against documentary evidence of remittance by the contractor. In case the contract period is extended for the reasons attributable to the contractor, no such reimbursement shall be made during extended period.

3.12.5 Income Tax shall be deducted at source (TDS) as per prevailing rules and copy of TDS shall be provided to contractor.



3.12.6 **Note: - Claim for reimbursement of GST pertaining to running bill should be submitted along with running bills.**

3.13 EVALUATION OF THE OFFER AND ISSUE OF WORK ORDER:

3.13.1 The bidder shall submit complete price of the package.

3.13.2 Evaluation of the offer will be strictly based on information submitted by the bidder. In view of this, the bidder is requested to go through the tender documents carefully and furnish all details clearly.

3.13.3 **Total price of the package shall be compared for the purpose of arriving at L-1.**

3.13.4 In the course of evaluation, more than bidder happens to occupy L1 status, effective L1 will be decided by soliciting discount price from the respective L1 bidders. In case more than one bidder happens to occupy L1 status even after soliciting discount, L1 bidder shall be decided by toss/ draw of lots, in the presence of respective L1 bidders or their representatives.

3.13.5 Based on the techno-commercial evaluation and reverse auction, the successful L1 bidder shall be awarded the contract for the complete package.

3.13.6 **No condition or deviations allowed in price bid.**

3.13.7 Work is indivisible in nature and shall be awarded to a single party.

3.13.8 **BHEL shall go for a Reverse Auction after the techno-commercial evaluation.** The bidder is required to communicate their consent for the same as per Reverse Auction **Annexure-K** for reference.

3.14 TERMS OF PAYMENT

3.14.1 Progressive payment shall be made after completion work as per price schedule and is subject to the deductions towards Security Deposit, Income Tax with surcharge, any other tax or levies applicable in the state and recoveries towards materials/services rendered on chargeable basis, penalty and LD, if applicable.

3.14.2 All the payments due to the Contractor will be made through Electronic Fund Transfer (EFT). For EFT facility the successful bidder is required to submit the details duly endorsed by their bankers in the prescribed format as mentioned at Annexure-R. Normally payment of bills takes about 60 days from the date of receipt of bills at Bhopal office duly verified by Site-In-Charge.

3.14.3 **Note: Advance Payment – BHEL does not give advance as a policy.**

3.15 EXTRA/ADDITIONAL ITEMS OF WORK

3.15.1 Any **NEW ITEM** of work which is explicitly not as per the scope envisaged in the tender but found essential during execution of the contract for satisfactory completion of the total work, it will come under the ambit of Extra Item of Work.



In case such extra item is executed, the rate for the same shall be determined in the following ways and in the same priority:

- 3.15.1.1** The rate for such extra item shall be derived from the nearest possible item or group of items of the awarded price schedule.
- 3.15.1.2** If the derivation of rate of an extra item is not possible as per above, the same shall be derived from any order placed by BHEL in last 1 year for the same item either on the same vendor or on any one else in the vicinity of 100 kilometres of project site.
- 3.15.1.3** In case of failure by all the above two clauses i.e. 3.15.1.1 and 3.15.1.2, the rate for extra item shall be derived on prevailing market rates and on actual basis by observing the consumption of materials (with permissible wastage as per standard practice), deployment of labour's and other incidentals with 15 % as contractor's premium and overheads. For this purpose, the contractor has to maintain and produce proper record duly certified by BHEL Site-In-Charge. Decision of BHEL in this regard shall be final and binding on the contractor.

3.16 SUSPENSION AND CANCELLATION OF WORK:

- 3.16.1** BHEL reserves the right to suspend and restart execution of the contract without invalidating the provisions of the contract. Orders for suspension or restart of the contract will be issued by BHEL to the contractor in writing. In such case, the time for completion of the contract will be extended for a period mutually agreed to between the parties. **No price variation on this account shall be admitted.**

3.17 INSURANCE:

- 3.17.1** It shall be the sole responsibility of the contractor to obtain transit insurance for envisaged scope of supply and get insured the property, materials, machineries, tools & tackles etc. belonging to him.
- 3.17.2** It shall be the sole responsibility of the contractor to insure sufficient coverage of his workmen against risks of accidents and injury while at work as required by the relevant rules and to pay compensation, if any, to them as per Workmen's Compensation Act. Contractor shall have accident insurance policy to cover the above. The work will be carried out in a protected area and all the Rules and Regulations of BHEL / its customer in the project Area which are in force from time to time shall be followed by the contractor.
- 3.17.3** If due to contractor's carelessness, negligence and / or non-observance of safety and other precautions, any accident / injury occurs to other persons / public, damage to BHEL's / its customer's property and/or personnel occurs, and if BHEL is unable to recover in full its claim from the Insurance Company, the deficit will be recovered from the contractor. The contractor shall be responsible for necessary compensation and other expenses in full, if so decided by the appropriate authority.



3.17.4 It shall be the responsibility of the contractor to provide security arrangements for the equipment/materials belonging to BHEL / its customer & handed over to the contractor for Transportation / erection till these are taken over by BHEL or are returned to BHEL / its customer's Stores.

3.18 PENALTY FOR DELAY:

3.18.1 The total work under scope is to be completed within the completion time mentioned under Clause 3.11.2 above. Required approval, drawings and material in scope of customer/BHEL shall be made available to contractor in time.

3.18.2 Delay in completion of the work under scope that may take place beyond contractual schedule OR within any extension for the reasons attributable to the contractor shall be subject to imposition of PENALTY at the rate of 0.5 % of the contract value per week of delay or part thereof subject to maximum ceiling of 10% of the contract value. GST on penalty shall be charged extra

3.19 DEFECT LIABILITY/WARRANTY

3.19.1 The warranty period for the work executed shall be for a period of 12 months commencing immediately from the date of completion of the total package/handing over of the units.

3.19.2 In case of any deficiencies in the workmanship, which is detected before the expiry of the warranty period, the contractor on notification by BHEL shall rectify or remedy the defects at his own cost and provisions of this clause shall apply to the portions of the work so replaced or renewed until the expiration of 12 months from the date of such replacement or renewal or the expiration of the original warranty period whichever is later, subject to minimum 05 days time is provided for remobilization of site and shut down of required duration is made available. The repairs of the defective work shall be done by the contractor within a reasonable time to be decided mutually. If any defects are not remedied within a reasonable time, BHEL may proceed to do the work after giving 30 days notice to the contractor at the reasonable price and debit the cost to the contractor, but without prejudice to any other rights which BHEL may have against the contractor in respect of such defects. The new warranty after repairs shall be for 12 months from the date of commissioning or original warranty whichever is later.

3.19.3 During warranty period the contractor shall be liable to repair or replace any defective work that may develop in his own workmanship or those of his subcontractors and arising solely from faulty workmanship. The contractor's obligation against the above clause shall be option to replace or repair at site. All transportation, insurance and other charges for carrying out remedy of the defective works shall be borne by the contractor.

The acceptance of the work by the Site-In-Charge shall in no way relieve the contractor of his obligation under this clause.



3.20**TERMINATION OF THE CONTRACT:**

No order shall be terminated after issue of the order or the understanding to proceed with the work except if desired by the Customer or Government of India. In the event of such cancellation, the Contractor shall be paid for all the work either fully or partly executed prior to the date of termination and the commitments entered into and expenses incurred for the execution of the contract as on the date of such termination. Nothing extra in addition to above shall be paid to the contractor in the event of such termination.

3.21**EXTENSION FOR DELAY:****3.21.1**

If the works be delayed due to Force majeure or delay on the part of the other contractors or tradesmen engaged by BHEL in executing work not forming part of the contract, or any other cause which, in the absolute discretion of BHEL is beyond the contractor's control then upon the happening of any such event causing delay, the contractor shall immediately give notice thereof in writing but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of BHEL to proceed with the work.

3.21.2

Requests for extension of time, to be eligible for consideration shall be made by contractor in writing within fifteen days of the happening of the event causing delay. The contractor may also, if practicable, indicate in such a request the period for which extension is desired considering the working plan for remaining work.

3.21.3

In any such case, Site-In-Charge, BHEL or any other officer authorised by BHEL may give a fair and reasonable extension of time for completion of the work. Such extension (Grant/Denial) shall be communicated to the contractor by the Site-In-Charge in writing, within 1 (One) month of the date of receipt of such request by the latter

3.21.4

NOTE: No additional compensation of any kind shall be admissible on account of this.

3.22**STATUTORY REQUIREMENT:**

It shall be the sole responsibility of the contractor to obtain all necessary statutory sanctions, approvals, Licence, Permits, & Certificates etc. as may be required to execute the work as envisaged in the scope. BHEL/Customer shall only provide all necessary assistance in obtaining such sanctions, approvals, licence, permits etc.

3.23**FACILITIES TO BE PROVIDED BY BHEL/CUSTOMER :****3.23.1**

Construction Office and Stores: Depending upon the availability and requirement, the space for construction of office, stores shall be provided to the contractor. Within two weeks of completion of the contract, the contractor will have to remove all such temporary structures and handover the space made available to the contractor in a clean, levelled and tidy condition



3.23.2 **Residential Accommodation and transportation:** All transportation and accommodation arrangements for staff deployed by the contractor shall be the responsibility of the contractor at his own expenses. BHEL shall not provide any such above arrangement / Space etc. whatsoever. However BHEL shall provide accommodation/office space to the contractor on the same terms and conditions which M/s MPPGCL will offer to BHEL. Arrangement of furnishings and electricity connection (& meters) at accommodation if provided by MPPGCL will be in the scope of the contractor

3.23.3 **Entry Passes :** Upon contractor request Customer shall issue entry passes for the contractor's staff during normal/extended working hours including Sunday and holidays, depending upon requirement of work

3.24 **TOOLS, TACKLES & EQUIPMENT**
All tools & Tackles and consumables as given in Annexure-'S' but not limited to this list (**only for guidance**) for the satisfactory execution of the job shall be arranged by the contractor at free of cost. All measuring instruments, tools and tackles should be tested periodically and contractor shall also produce necessary certificate and proof of having tested & calibrated from certified agencies. List of tools, tackles & equipment's of reputed manufacturers with proper Test / Calibration Certificates are to be arranged by the contractor at his own cost.

3.25 **JOINT VENTURE**
A joint venture (JV, sometimes 'J-V') is a legal entity formed between two parties to undertake an economic activity together. Thus, a joint venture may be defined for present purposes as any arrangement whereby two or more parties co-operate in order to run a business or to achieve a commercial objective. This co-operation may take various forms and may involve the running of a business on a long-term basis or on the realization of a particular project. The business may be entirely new, or it may be an existing business, which, it is believed, will benefit from the introduction of a further participant.

3.26 **Agreement:** There should be a Joint Venture agreement between two parties showing terms & conditions of Joint Venture. The parties to Joint Venture shall jointly and severally be liable to BHEL of all obligations of the Joint Venture. The parties to Joint Venture shall maintain their Joint Venture agreement till successful execution and completion of contract with BHEL. The Joint Venture shall submit a notarized Joint Venture agreement to BHEL at the time of submitting offer.



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Section 4 : TECHNICAL SPECIFICATIONS



External Services Hydro, BHEL Bhopal

4.1 INTENT OF SPECIFICATION**4.1.1**

This specification is intended for receipt of material at site, unloading at site, storage, transportation of material from store to work site and back, erection, providing testing equipment for all the tests and testing and commissioning of mechanical systems, electrical, instrumentation and control as given under scope of work.

4.1.2

Any item / equipment not specifically mentioned in the contract / technical specification but required for completeness and safe / normal operation of the listed equipment system, is deemed included in the contract without any commercial implication. During the contract execution any ambiguity / contradiction / difference of opinion arising will be interpreted by the BHEL/Customer / his consultant and his decision shall be binding on the contractor.

4.2 PROJECT INFORMATION**4.2.1**

Tons Hydro-electric Project with an installed capacity of 305MW is the largest single unit capacity hydro machines of MPPGCL. This 3*105MW Project is part of the Bansagar Project and is located in Sirmour district near to Rewa city.

4.2.2**Project address:**

Tons Hydroelectric Project
MPPGCL, Sirmour
MP 486448

Nearest City: Rewa

Nearest Railway Station: Rewa

Nearest Airport: Allahabad / Khajuraho / Jabalpur.

4.2.3**Salient features of project:**

• F.R.L. Beehar/Tons	280/280.50M
• No. of Expansion Joint in penstock	one in each penstock
• Top of the Power House	126.00Mtr(EL)
• DT deck Level (crane level)	120.00M(EL)
• Crane Level (EOT)	119.00M(EL)
• ECR	116 M(EL)
• Cable gallery	111.50 M(EL)
• Service bay level (UCB)	107.00M(EL)
• STN MCC Floor	102.5 M(EL)
• PP set floor	99.00M (EL)
• C/L of turbine/gen coupling	99.4M (EL)
• Turbine pit/brake jack panel floor	.10(EL)
• C/L of turbine /GV/Spiral	95.399M (EL)
• Balancing pipe C/L DT area	93.44M(EL)
• MIV floor	91.6 m(EL)



- Dia. of Surge Shaft 7.3M

4.2.4 Important information of machine

A) Turbine:-

- Type: Vertical shaft francis
- (ii)Design/Rated head: 175 m
- Maximum static head: 183.60 m
- Rated output: 107,000 KW
- Maximum output: 117,600 KW
- Speed: 250 rpm
- Run away speed: 440 rpm
- Rated discharge: 66.80 cubic meter/sec
- Maximum discharge: 75.6 cubic meter/sec
- Submergence of C.L. of guide apparatus: 1.0 m
- Max. hydraulic thrust: 200 Kg
- Guide vane PCD: 3840 m
- No. of guide vanes: 24
- Spiral inlet dia: 2800 mm
- Runner exit dia: 2950 mm
- Turbine shaft dia: 820 mm
- Bearing journal dia.: 1100 mm
- GV servomotor dia.: 500 mm
- GV full stroke: 251 mm
- Flywheel effect GD sq.: 7200 Ton-sqm.
- Top Labyrinth Radial 1.0 to 1.28 mm clearance
- Bottom Labyrinth Radial 1.2 to 1.48 mm clearance
- Machine jacking Limit 15 mm (Max.)
- Runner Blade 11 (odd)
- Cooling water requirement 5400 ltr/min
– Air cooler
- Cooling water requirement 840 ltr/min
– LP cooler
- Cooling water requirement 240 ltr/min
– LGB cooler
- Tubes in one Gen air cooler 164 nos.
- Tubes in one LP cooler 500 nos.
- Brake Jack Pad Size 325x325x38mm
- Preloaded Spring for thrust 620 nos.
pad for one unit
- Spring Mattress Deflation 2.0mm
at normal load (590 tonnes)
- Gen barrel dia 11500mm
- Turbine shaft length 3633mm
- Gen shaft length 7850mm
- Turbine /gen shaft 1410mm
coupling Dia
- Center line of TGB 97.199 EL
- Rotary sleeve outer Dia 1050mm
- Insulated bolt of Runner 16(8 pair)
disc (Qty/U)



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- Insulated Dowel of Runner Disc 8 (50.60X180mm)
- Guide Vanes Servomotor Stroke Length 251 mm
- Guide vanes full Opening 26 Degree
- GV PCD 3840mm
- Maximum Hydraulic Thrust on M/C 200 KG
- Runner Disc Outer Dia. 2050mm
- Runner Disc Inner Dia. 1000mm
- Spiral Dia. 2800mm
- Penstock Dia. at valve house 4560mm
- MIV opening Time 60+-10 sec.
- MIV opening Stroke length 1415 mm
- Runner Exit Dia 2950mm
- Throat ring ID 2970mm
- PP set capacity (Receiver in ltr) 2666(oil)+5334(air)=8000
- Radial Clearance B/W Shaft Sleeve and sealing housing 3.5mm(radial)
- Runner Dia. & Weight 2950mm, 18Tonnes
- Turbine Shaft Dia. 820mm
- Turbine + Gen Shaft weight 55.5 tonnes (approx)
- Wound Stator Weight 180Tonnes
- Wound Rotor Weight 300Tonnes
- Turbine Shaft Material Forged Steel

(B) Generator:

- Type: HGT 760/170-24 K, 11667 KVA, 105000 KW, (128333 KVA, continuous overload
- capacity), 11000±5% volts, 3 phase, 50 Hz, 0.9 PF lagging, 24 poles, 250 rpm,
- Air gap at pole centre: 25 mm
- Stator resistance/phase at 20°C : 0.0016 ohm
- Stator connection: star
- Field winding resistance at 20°C : 0.18 ohm
- Slip ring brushes (12 per ring) : 24
- Top Air Guide/baffle plate/separator plate (Qty.) 18(each)
- Bottom Air Guide/baffle plate/separator plate (Qty.) 18(each)

(C) Bearings:

- Thrust bearing type: spring mattress, No. of pads: 10, Bearing dimensions: 2050mmOD/1000 mm (ii) Guide bearing (Top & Lower): Pivoted pads, No. of pads: 12,
- Bearing dimensions: 250 x 250 mm x 1600 dia



(D) Coolers :

- (i) Stator/ Generator air coolers: Fin type tube cooler, No. of cooler: 06 nos.
- (ii) LP coolers: for cooling UGB/Thrust bearing oil, No. of cooler: 3 nos.
- (iii) LGB Cooler: 04 nos. fitted at Lower guide bearing housing
- (iv) TGB cooler: 08 nos. coolers fitted in Turbine guide bearing chamber

4.3**SCOPE OF SERVICES:**

The scope of services includes all the major and minor activities required for rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 for successful running of the machine.

Any other activity that is not listed here but required to be done for successful running of the machine, shall be in the scope of contractor.

4.4**SCOPE OF WORK:**

Following are the major activities that will have to be carried out during subject work.

1. Dismantling of Unit.
2. Rectification / Refurbishment/ overhauling work of generator.
3. Rectification / Refurbishment / overhauling work of turbine.
4. Trial assembly of major turbine components.
5. Final erection / Re-assembly work – turbine.
6. Final erection / Re-assembly work – generator:
7. Boxing up of Unit.
8. Pre commissioning / commissioning tests, final running of machine, synchronisation of unit & handing over of the machine to customer after 72 hrs of trial run.

The details of scope of work under above heads and sequential activities are as below:

4.4.1**DISMANTLING OF UNIT****4.4.1.1****DISMANTLING OF GENERATOR**

1. Jacking of machine, proper punching / marking of all the components before start of dismantling activities, recording existing TGB, LGB, UGB bearing gaps, rotor and stator air gap and magnetic axis recording, top and bottom runner labyrinth gap.
2. Removal/ dismantling of dome, draining of oil from thrust bearing, UGB & LGB.
3. Dismantling of frame of SSG and top chequered plates of generator.
4. Dismantling of oil vapour seal and its pipeline and draining of all oil from LGB, UGB/TB housing.
5. Dismantling of thrust bearing, UGB & LGB coolers. Oil and coolers pipe lines.



6. Dismantling of slip ring assembly, brush holder's assembly.
7. Dismantling of top baffle plates, top and bottom air guides assemblies.
8. Removal of all the TSD's, RTD's & their capillaries/wirings.
9. Removal of T.B, UGB & LGB pads, dismantling of cover of oil housing of UGB & LGB.
10. Removal of thrust collar by heating/ hydraulic pressing the collar.
11. Dismantling of thrust bearing disc with thrust collar considering for checking the healthiness of existing TB disc, and replaced with new / repaired disc if found defective.
12. Removal of T.B disc, dismantling of all cooling pipelines and any other pipe works in bracket area.
13. Disconnection of all control & excitation cables.
14. Removal of top bracket by dismantling of dowels & holding down bolts of top bracket (Shims of each top bracket arms measure and store separately). Recording journal distances from housing, measurement of LGB & TGB journal distances w.r.t. LGB & TGB housing respectively.
15. Decoupling of Generator & Turbine shaft.
16. Removal of Rotor by fixing rotor-lifting device.
17. Dismantling of the entire Rotor poles and thereafter dispatch to works (BHEL Bhopal) for re-insulation. Necessary packing and packing material at site shall be arranged by contractor.
18. Dismantling of stator air coolers
19. Dismantling and removal of bottom bracket along with brake & jack assembly.

4.4.1.2 DISMANTLING OF TURBINE

1. Unit in dewater condition shall be provided by customer (customer scope)
2. Opening of penstock and draft-tube drain valve after sealing of both the gates.
3. Opening of both spiral casing and draft-tube manholes. Internal illumination of spiral casing. Making working platform and joint inspection.
4. Dismantling of both Guide vane servomotors from regulating ring & shifting to the service bay.
5. Dismantling of TGB Housing chamber, RTDs, and DTTs. Recording Clearance of TGB Pads, TGB Housing with shaft journal.
6. Shaft seal dismantling



7. TGB Pads and TGB housing dismantling. Dismantling of all linkage, strap, lever, housing, top cover and associated pipeline.
8. Making of temporary shaft dismantling Platform/Device for holding Turbine shaft along with Runner at S/B.
9. Runner shaft assembly removal and shifting to S/B
10. All Guide Vanes (24 Nos.) to be removed with lifting device and shifted to service bay for repair work at workshop.
11. Dismantling and removal of Main Shaft Coupling Bolts & Nuts. Coupling guards (U/L) dismantling, runner cone.
12. Dispatch pivot ring and GV bush housing to Bhopal along with newly supplied bushes available at site for bronze bush replacement and surface repair. Necessary packing and packing material at site shall be arranged by contractor

4.4.2 RECTIFICATION /REFURBISHMENT WORK OF GENERATOR

4.4.2.1 RECTIFICATION OF CORE IN THE PIT

1. Before starting the stator core activities, necessary changeable working platform for covering generator barrel and isolation for turbine pit shall be built by contractor. (Necessary Material of adequate strength and size shall be arranged by contractor).
2. Dismantling of Stator windings (by de-brazing) / slot wedges / insulation materials etc.
3. Dismantling of pressing plates, bar support ring and brackets and safely remove the stator core punching from top of core to bottom pocket.
4. Cleaning, grinding of stator surface, primer coating, painting of stator frame and other stator parts.
5. Checking, levelling of stator frame, key bars verticality, fingerplate levelling. Check and correct if required.
6. Cleaning of and safe storage of removed usable stator punching.
7. Core punching laying by new supplied punching from bottom pocket to top of the core height. (It shall be ensured that the Core Slots are built up vertically in a straight line at every step of core building).
8. Required number of RTD's shall be provided at suitable places in the Stator Core while building.
9. Core diameter and Core height shall be measured during the entire process of core building after every 200mm of core build up.
10. Final pressing of the core after its complete built-up using the existing Finger Plates and the Core Studs using a suitable torque spanner to designed torque value.



11. Record the final core diameter and core height of the Stator Core during core consolidation (core flux test). These dimensions need to be taken at equidistant points across the entire periphery of the Generator Core.

4.4.2.2

WINDING OF STATOR

1. Preparation for Bottom bar laying (i.e. fixing of brackets, support rings at top and trial assy etc.)
2. The end-winding portion of the coils will be insulated with flexible tapes. Thus, the insulation will be rigid in the slot portion and flexible in the overhang portion, which greatly facilitates assembly and removal of coils from the slots.
3. Painting of the inside surface of Core Slots using semi-conducting varnish. Care to be taken that rest of core surface is well protected from this varnish.
4. Laying of Bottom bars (270 nos.) after insuring healthiness of bars.
5. Preparation of top bar laying (HV test of Bottom bars in position, assy of separators, winding RTDs etc.), lacing of bottom bars by putting end-winding packers.
6. Laying of top bars (270 nos.)
7. HV test of combined bottom & top bars in slots, slot wedging etc.
8. Preparation of brazing of top and bottom series joints of Bottom and top series joints
9. Brazing of terminal joints, insulation taping of jumpers.
10. Re-tightening of MOS blocks lacing.
11. Fixing and binding packers between Side Bottom bar jumpers and Bend type Top bar jumper
12. Fixing of packers between bus bars and jumpers to separate them where ever no gap is found in between
13. Applying epoxy cement on terminal joints and then taping of insulations on brazed joints and at portion under terminal bus bar bracket.
14. Setting, fixing and binding bus ring packers with bus bars and brackets.
15. Cleaning of stator and Initiating Dry out process
16. HV test of wound stator
17. Spray painting of the Stator Core surface using Grey Becktol insulation paint and oxygen gas to avoid ingress of any moisture and red gel (insulating) painting on overhang winding.

4.4.2.3

RECTIFICATION & RE-ASSEMBLY OF ROTOR IN SERVICE BAY



1. Measurement of IR & PI of rotor winding (Before pole dismantling).
2. De-soldering of all the Generator Rotor pole joints.
3. Refurbishment and complete overhauling of rotor parts. D.P. Testing of all the rotor spider weld joints.
4. Testing, installation of rotor pole assembly on the rotor rim. Tightening of all pole keys. Replacement of damaged/defective pole keys with new pole keys of similar material.
5. All springs and rotor pole keys to be replaced with new to ensure vibration free operation of machine.
6. Testing of poles including I.R. values as well as Impedance measurement during assembly.
7. Preparation & soldering of pole to Pole and Pole to CCL (current carrying leads) joints and their insulation.
8. Spray painting of Rotor pole winding with Epoxy Red Gel insulation paints using oxygen gas and Grey Becktol paint on pole shoe faces.
9. Carrying out the Dry out of rotor pole assembly and final HV test.

4.4.2.4

OVERHAULING OF BALANCE GENERATOR PARTS

1. Complete cleaning & centering of slip ring.
2. Cleaning of brush rocker assembly & replacement of worn out brushes.
3. Complete cleaning of generator shaft and inner tank of UGB & LGB.
4. Polishing of mirror surface of T.B disc with Colgate powder.
5. Cleaning of T.B collar surface, Scraping of thrust bearing pad segments w.r.t T.B disc. (If pads are debited type)
6. Matching of UGB and LGB pads w.r.t. journals.
7. DP test of existing thrust pads, LGB Pads & UGB pads should be conducted. Pads should be polished with oil stone, Colgate powder and blue matched with their respective surfaces. Oil pockets should be prepared in all thrust & Guide pads. If the thickness of pads are not as per requirement then respective bearings will be replaced.
8. Replacement of all defective pressure gauges, flow relays, level relays.
9. Cleaning & hydraulic testing of thrust bearing, UGB, LGB & TGB coolers.
10. Overhauling/replacement of various valves in bearing cooling, individual valves of stator hot air coolers & oil pipe lines.
11. Calibration of all TSDs of TB, UGB, LGB, Hot air & TGB.
12. Checking of all RTDs.
13. Replacement of brake & jack system with new one



14. Brake dust collector system, oil leakage unit, brake & jack control panel & associated starter panel.
15. HS system overhaul (customer scope)
16. Measurement of the height of each spring of spring mattress and segregate them according to height with proper tagging.
17. Blue matching of all surfaces at Generator portion required to maintain level like upper bracket & Lower bracket matching plates were conducted. All existing shims of lower bracket & Upper bracket should be cleaned thoroughly and placed properly with proper marking.
18. Dismantling of thrust collar with runner disc. Replacement of old runner disc by repaired runner disc available at site, after blue matching with thrust collar.

4.4.3**RECTIFICATION/REFURBISHMENT/OVERHAULING WORK – TURBINE**

1. Replacement of TGB cooling water header.
2. Replacement of old labyrinth (top &bottom) with new one.
3. Replacement of SS throat ring after runner.
4. Replacement of runner cone.
5. Replacement of old header with new header of shaft seal cooling line.
6. Replacement of new balancing pipeline for top cover
7. Replacement of airline for isolating seal, and shaft seal with new airline.
8. Replacement of aeration valve with isolating valve
9. Maintenance / replacement of DT inspection door
10. DP & UT test of existing TGB Pads should be conducted. Pads should be polished with oil stone, Colgate powder and blue matched with their respective surfaces. Oil pockets should be prepared in all thrust & Guide pads. If the thickness of pads are not as per requirement then respective bearings will be replaced.
11. Replacement of all pressure, level switch, flow gauges.
12. Hydraulic testing of newly supplied cooling water header pipe lines.
13. Cleaning of all coolers & hydraulic testing.
14. Dismantling of existing guide apparatus linkage mechanism.
15. Installation of new GV servomotor by proper levelling.
16. Assembling of all the dismantled parts.
17. Checking and setting of all the safety devices of the unit such as hydraulic over speed, Mechanical over speed etc.



4.4.4**TRIAL ASSEMBLY OF MAJOR TURBINE COMPONENTS**

1. Trial assembly of guide apparatus by putting pivot ring over stay ring.
2. Centering of pivot ring w.r.t Stay ring,
3. Trial assembly by lowering of all the 24 nos. guide vanes & top cover along with G.V. bush housing.
4. Checking of top & bottom clearance of guide vanes etc.
5. Dismantling of all parts lowered for trial assembly.
6. Lowering of new regulating ring and recording gaps for retaining ring machining.

4.4.5**FINAL ERECTION / RE-ASSEMBLY WORK – TURBINE**

1. Lowering of pivot ring including tightening of bolts & fixing of 6 nos. dowels.
2. Fitting of runner with turbine shaft.
3. Centering of turbine shaft assembly w.r.t. lower labyrinth & elevation check etc. including rotation of runner shaft assembly for free movement w.r.t. lower labyrinth & checking of labyrinth gaps etc.
4. Assembly of guide vanes on lower ring with fitting of cup seal & steel ring.
5. Lowering of Top cover with rubber cord & tightening of all fixing bolts along with fixing of 6 nos. dowels.
6. Checking & rectification for any water leakage through rubber cord of top cover.
7. Assembly of Guide vane with rubber cord, cup seals and tightening of all fixing bolts along with fixing of dowels.
8. Assembly of all levers, stoppers etc.
9. Checking and rectification by welding & grinding for any cracks observed during DP testing in turbine guide bearing body.
10. Lowering & assembly of regulating ring.
11. Assembly of servomotors, connecting rods, links etc. with the adjustment of both servomotor arms and it's stoke adjustment.
12. Lowering and fitting TGB inner & outer housing,
13. Dowelling of turbine guide bearing body.
14. Fitting of all greasing accessories, pipelines, dose feeders, greasing connections, & nibbles in G.V bushes.
15. Greasing in all lower & upper bushes of guide vanes.
16. Cleaning of TGB pads and re-fixing of TGB pad sleeves after I.R check.



17. Fitting of diagonally opposite pressure release pipelines of turbine top cover, extending them to leakage drainage gallery and plugging of unwanted holes.
18. Fitting & testing of TGB coolers, Fixing of turbine pit cover platform & it's chequer plates.
19. Top cover pressure release pipelines, TGB & shaft seal cooling system.
20. Checking and adjustment of bedding gaps between all the guide vanes.
21. Checking of dry stroke of guide vanes.

4.4.6**FINAL ERECTION / RE-ASSEMBLY WORK - GENERATOR**

1. Lowering of lower bracket, levelling of brake pads & mechanical locking.
2. Commissioning of brake & jack system.
3. Fixing of rotor lifting device. Lowering of rotor & removal of lifting beam.
4. Coupling of Rotor assembly with turbine shaft
5. Preparation and lowering of top bracket along with trust bearing assembly. Making HS operational.
6. Assembly of thrust bearing disc with shaft considering the required rectification in TB disc by using re-usable items / new items.
7. Lowering of thrust collar assembly, insuring proper match marking and maintain equal gaps from each TB pads (considering the jacking height of the rotor)
8. Inspection of stator - rotor air gap and rough centering of shaft,
9. Shifting of top bracket for centering with reference to rotor and doweling of top bracket on stator
10. Lowering of rotor (unjacking) on thrust pads and Rough Centering of rotor taking LGB housing as reference
11. Filling of oil in TB housing, HS lube system make operational and preparation for manual rotor rotation.
12. Rotor levelling
13. Unit axis alignment

4.4.7**BOXING UP OF UNIT**

1. Assembly of shaft sealing & inner tank.
2. Boxing up of all bearings including fixing of inner tank, collectors & gap setting of thrust bearing, UGB, LGB & TGB.
3. Installation/ fitting of TGB Pads.
4. Dowelling of turbine guide bearing body.



5. Assembly of all bearing coolers (TGB, UGB, LGB & Th. Bearing) & pipelines including
6. Centring, taking Turbine housing and LGB housing as reference and locking of rotor in centered position. Fixing of RTD's & TSD's of all bearings.
7. Assembly of slip ring & brush rocker assembly.
8. Removal of D/T platform through D/Tube manholes & closing of D/Tube & spiral manholes after confirming the closing of D/Tube drain valves.
9. Installation of shaft seal assembly
10. Checking stator forms and rotor forms and setting gaps of stator & rotor as per requirement
11. Assembly Air guide assy. at top & bottom
12. Assembly of stator air coolers in position
13. Assembly of LGB pads and setting pad clearances
14. Assembly of UGB pads and setting pad clearances
15. Instrumentation at LGB /UGB/TGB (RTD & DTT)
16. Vapour seal assembly at LGB & UGB
17. Assembly of oil coolers in position
18. Assembly of Earthling Brush
19. Assembly of tubular shaft / slip ring assembly, Over speed device, Top dome etc
20. Cooling Water piping, Vapour seal piping
21. Miscellaneous Box-up activities

4.4.8 COMMISSIONING & HANDING OVER

4.4.8.1 ROTOR TESTING

1. Insulation resistance test
2. Polarization index
3. Winding resistance
4. AC impedance
5. Pole Balancing Pole balance

4.4.8.1 STATOR TESTING

1. Insulation resistance test
2. Polarization index



3. Winding resistance
4. Tan Delta and Capacitance Test of stator winding. Stator bottom & top bars and complete wound stator HV test
5. Phase Sequence test
6. OCC & SCC tests
7. Final testing/ inspection of rotor, stator and top to bottom of machine
8. Mechanical spinning & bearing run
9. IR-PI, dry out, HV test & tan delta test of stator
10. Recommissioning test/OCC/SCC, synchronization & load throw off test etc.
11. Vibration measurement and rectification shall be carried out within permissible limit.
12. Handing over of machine to M/s MPPGCL after reliability run for 72 hours.

4.5 COMPLETION SCHEDULE

4.5.1 Total completion time for unit shall not exceed beyond 08 MONTHS from the date of handing over of machine to contractor for rehabilitation and restoration work. The commencement date of job will be reckoned as the date of handing over of machine to contractor and the completion date will be reckoned as the date of completion of all works as per the scope of work and taking over the machine by Customer M/s MPPGCL after successful trial run of 72 hours

4.5.2 **NOTE:** Completion time is the essence of the contract. Hence, the contractor may be required to arrange working in extended working hours/ round the clock working to achieve scheduled completion. Written permission will have to be obtained from the customer well in advance for working on extended hours/Sundays/Holidays,.

4.6 LIST OF DRAWING, DOCUMENTS AND MAJOR T&P AVAILABLE AT SITE / TO BE PROVIDED: FREE OF COST

4.6.1 Documents like assembly & erection drawings for turbine & generator, O & M manuals, Original/ latest log sheets/ protocols of erection & commissioning of unit available at site shall be provided for reference.

4.6.2 Rotor Lifting Device with tested slings of required capacity.

4.6.3 Stools/ stand for Rotor as per drawing.

4.6.4 Generator shaft Lifting Device with tested slings of required capacity.

4.6.5 All special lifting devices & slings for balance items of Turbine & Generator, as required



4.6.6 Special spanners / torque tightening device for tightening of coupling bolts of Runner & Turbine Shaft, Generator Shaft etc.

4.6.7 Oil centrifuging machine.

4.7 FACILITIES TO BE PROVIDED FREE OF COST

1. 2 no EOT crane with two hooks of 175 TON each capacities and 1 hook of 30 Ton. Crane operators shall be provided by the Corporation during normal working hours only. Sleepers, Packers and special lifting devices as available.
2. Special tools like heavy spanners, bearing pullers and other special tools supplied by the original manufacturer with the equipment.
3. Electricity for construction power and lighting, water supply at one point at power house.
4. Space for site stores as available
5. Covered space for site office at one point.
6. Special tools like heavy spanners, bearing pullers and other special tools supplied by the original manufacturer with the equipment.
7. Electricity for construction power and lighting, water supply at one point at power house.
8. Space for site stores as available
9. Covered space for site office at one point.

4.8 FACILITIES EXTENDED ON CHARGEABLE BASIS BY THE CUSTOMER

1. Existing Workshop facilities available with MPPGCL
2. Purchaser may provide Mobile Crane service on request in emergency conditions on chargeable basis, if available.
3. Unfurnished quarters for Subcontractor workmen/ Supervisors as available.
4. Electricity connection in above quarters .
5. Medical facilities for Contractor personnel in Purchaser's hospital at site.

4.9 CONTRACTOR'S RESPONSIBILITY

1. The work under the scope of work shall be executed with the best skill and know-how available with the contractor and in accordance with the clearances and adjustments set forth in the manufacturer's drawing/instructions/other information furnished to them.
2. The various settings, clearances, adjustments and benchmarks will be restored during overhauling to the conditions as far as practicable and possible in line with the various OEM drawings / documents / erection



and commissioning protocols, the conditions shall be brought to the design values if available or the conditions as observed at the time of dismantling of the equipment, in consultation with Corporation.

3. In case part of the work is not executed or completed due to reasons attributable to contractor, the price for the same shall be decided upon mutually and the amount of the same shall be deducted from contractor's bills.
4. The contractor shall organize the site with required manpower both skilled/unskilled/semiskilled/highly skilled workers and supervisory engineers. The equipment should be handled with the utmost care and skills.
5. Contractor shall provide fully functional desk top computer along with laser jet printer for BHEL site office for day to day work and also one office assistant for maintaining BHEL site office.
6. Safety/ calibration certificate of testing and lifting devices shall be ensured by contractor before use

4.10 CONTRACT REQUIREMENT

4.10.1

The contractor shall comply with all applicable state and central laws, statutory rules, regulations, etc. such as payment of wages Act - 1938 (Bare Act 1994) , Minimum Wages act 1948 (1993), Workmen Compensation Act - 1923 (1994), Employers Liability Act-1938, Industrial Disputes Act-1947(1994), Employees Provident Fund & Miscellaneous Provisions Act - 1952 (1992), Employees State Insurance Act-1948 (1994) & contract labour (Regulation & The Arbitration Act-1940) (Bare Act-1994).

4.10.2

To enable the contractor for obtaining the labour license, Principal Employers Certificate in Form V or any other prescribed form shall be issued by the Corporation to the contractor.

4.10.3

Contractor shall depute experts for project site and also other areas as required during execution of the work.

4.11 INSURANCE AND SECURITY

4.11.1

Contractor shall arrange insurance at their cost against loss, destruction, damage or theft of the equipment's and plants offered for overhauling during the work period.

4.11.2

The contractor shall make endeavor to preserve the dismantled components and keep in their custody and shall arrange for adequate security arrangement to prevent theft and pilferage and also coordinate with other agencies working at the power plant premises. Proper stacking / storage records are to be maintained by the contractor with all the relevant documents.

4.12 QUALITY ASSURANCE, INSPECTION AND TESTING



1. The services under this specification shall have assured quality and workmanship. The Bidder in his proposal shall submit his Field Quality Plan (as per enclosed format) containing quality assurance program and quality assurance documents for BHEL's approval. The Contractor shall be bound to conduct all stage inspections on various equipment/material during execution process in accordance with the approved copy of this document. BHEL / Customer shall have the right to carry out Quality Audit and Quality Surveillance by witnessing any or all such tests to be carried out at works as and when desired.
2. These audit/surveillance/approvals shall not however relieve the contractor of their responsibility of the Quality Assurance and overall guarantee and responsibility shall wholly lie with the Bidder within the preview of the contract.
3. Tests / inspections shall be carried out during and after the completion of services as applicable in accordance with relevant codes and standards.
4. BHEL / Customer or his authorized representative shall have his full access to witness any or all tests/inspections to be carried out at work spot.
5. After installation, the equipment/system shall be tested and commissioned at site to customer's full satisfaction as per the instructions of the manufacturer.

4.13 ERECTION AND INSTALLATION

1. The installation work shall comply with the latest applicable standards, regulations, electricity rules, and safety codes relevant to the location where the installation is being carried out.
2. Erection activities work shall include but not limited to:-
 - Shifting of materials from stores to erection site.
 - Cleaning and assembling equipment for erection.
 - Taking over of fronts
 - Placing of equipment's in position, leveling, etc.
 - Final welding as applicable, NDT as per specification.
 - Erection of equipment.
3. Cleaning, surface preparation, corrosion protection, and painting.
4. Providing all necessary platform, stairs, ladders etc. for operation & maintenance of equipment / systems, if required, during the course of the execution.
5. Arranging all temporary supply of special aids for erection, commissioning etc. like scaffolding, etc



6. Provide all labour, necessary erection equipment, temporary site facilities, temporary connection to power supply, water supply etc. from the customer supplied sources, for erection, tests, tests on completion required for the fulfillment of the contractor's duties in connection with the works.
7. Arrange & deliver power, fuel, water, waste water discharge etc. during construction, erection, startup and testing and pay for construction power & water.
8. Apply for all permits & get authorities approval for all actions, which require approval or permit.
9. Co-ordination with approval agencies on plant interface areas.
10. Carry out testing, tests on completion of the plant and equipment applicable.
11. Any other services in connection with or related to the works so far as the necessity for providing the same is specified in or reasonably to be inferred from the contract and / or required for the completion of the project.
12. All dismantled/left-over parts shall be transported to stores within the plant boundary.
13. **Pressure Testing** : Unless otherwise specified pressure tests shall be made on:
 - All items, which are subjected to pressure and have not been pressure tested in the manufacturer's works.
 - Site-made welds and other forms of joint on pressure items.
 - Tests shall be made after erection and completion of piping up to a suitable stop valve before painting.

4.14**OVER RUN CHARGES :**

No over-run charges shall be paid.

4.15**STORAGE OF MATERIALS:**

The contractor shall store all materials in proper manner to avoid contamination and deterioration. Should the place where the contractor stores the materials be required by the Site-in charge for any other purpose, the contractor should arrange to clear the space within such time as may be instructed by the Site-in-Charge.

4.16**PERMANENT BENCH MARKS****4.16.1**

Where directed by the Site-in-Charge, the contractor shall provide permanent benchmarks. Likewise, any other levels, lines, or points specifically required by



4.16.2 The contractor shall carefully protect and preserve such important mark during execution of the work.



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PART – 1

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External Services Hydro, BHEL Bhopal

ANNEXURE - A

COVERING LETTER

Sr MANAGER (ESH)
 ESH GROUP
 NEW HYDRO BLOCK, ANNEXE,
 GROUND FLOOR,
 BHEL, PIPLANI, BHOPAL M.P. – 462022

Dear Sir,

I/We hereby offer to carry out the work detailed in Tender Specification No. /-NIT No.: ESH/TONS/UNIT#3/T-01, issued by Bharat Heavy Electricals Limited BHOPAL in accordance with the terms and conditions thereof.

I/We have carefully perused the following listed documents connected with the above work and agree to abide by the same: -

1. Instructions to Tenderers
2. General Terms and Conditions
3. Special Conditions
4. Technical Specifications
5. Price Schedule

I/We have deposited / forwarded herewith the Tender Fee and Earnest Money deposit. Details of Tender Fee and EMD payment are furnished in the check list.

EMD shall be refunded should our offer not be accepted. Should our offer be accepted, I/We further agree to deposit the required amount of Security Deposit for the work as provided for in the tender specification within the stipulated time as may be indicated by BHEL BHOPAL.

I/We further agree to execute all the works referred to in the said documents upon the terms and conditions contained or referred to therein and as detailed in the appendices annexed there to.

Signature of the Tenderer
 Address

PLACE :

DATE :



External Services Hydro, BHEL Bhopal

ANNEXURE -B

CHECKLIST & SCHEDULE OF GENERAL PARTICULARS

NIT No. ESH/TONS/UNIT#3/T-01

NOTE : - Bidder shall fill in the following details and no column should be left blank.

1.	Name & Address of the Bidder		
2.	Fax / Email Address		
3.	Phone No. (Office)	OFFICE:-	MOB:-
4.	Name & designation of the official of the tenderer to whom all the references shall be made		
5.	Bidder's proposal No. & date		
6.	Whether Tender Fee submitted by EFT Please give details.		
7.	Whether EMD submitted by EFT / MSME certificate Pl. give details.		
8.	Validity of offer / rates quoted for 3 months from the offer date	Yes / No	
9.	PAN No. Photocopy enclosed	Yes / No (PAN NO. -- _____)	
10.	GSTIN Registration No. (If Applicable) photocopy enclosed		
11.	Attested copy of power of attorney	Yes / No	
12.	Whether signed copy of tender document submitted	Yes/NO	
13.	Details about type of the firm with relevant supporting documents.	Yes / No	
14.	Financial viability in the format at Annexure "C"	Yes / No	
15.	Detail of experience in the format at Annexure "D"	Yes / No	
16.	Month wise Manpower Deployment Plan in the format at Annexure "E"	Yes / No	
17.	List of tools & tackles in the format at Annexure "F"	Yes / No	
18.	Declaration sheet in the format at Annexure "G"	Yes / No	
19.	No Deviation Filled (Technical) as per Annexure "H"	Yes / No	
20.	No Deviation Filled (Commercial) as per Annexure "I"	Yes / No	
21.	Certificate confirming knowledge about site condition as per Annexure "J"	Yes / No	
22.	Certificate confirming participation in reverse auction, if necessary, as per Annexure "K"	Yes / No	
23.	Certificate confirming about not being blacklisted by BHEL /customer as per Annexure "L"	Yes / No	

SIGNATURE OF THE BIDDER WITH SEAL



External Services Hydro, BHEL Bhopal

ANNEXURE -C

FINANCIAL VIABILITY

1.	Owner's capital in the business (in case of partnership, please mention percentage shares and amounts)	Fin Year	Rs.
2	Quantum of business done during the last Three financial years	2018-19	Rs.
		2017-18	Rs.
		2016-17	Rs.
3	Value of fixed assets of the businesses in last three financial years	2018-19	Rs.
		2017-18	Rs.1
		2016-17	Rs.
2.	Guarantee limits (if any) enjoyed by the firm		Rs.
3.	Over draft limits (if any) enjoyed by the firm		Rs.
4.	Please enclose audited profit and loss account and balance sheet for last 3 years (indicate no. of sheets) ending as on 31.03.2019.	Yes	No

Note:-

1. All the above documents should be duly certified by auditors / Bank as may be applicable.

SIGNATURE OF THE BIDDER WITH SEAL



External Services Hydro, BHEL Bhopal

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ANNEXURE - D

INFORMATION OF SIMILAR JOBS EXECUTED TILL 31.08.2020

NIT No. ESH/TONS/UNIT#3/T-01

Sr.No.	Agency by whom awarded with name & contact no. of concerned person	Particulars of the works awarded	Work Order No. with Date	Work Order value	Date of completion

Note:- Refer Clause 1.1.9 of "Instructions to Tenderers"

SIGNATURE OF THE BIDDER WITH SEAL



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ANNEXURE -E

MONTH WISE MANPOWER DEPLOYMENT PLAN TO BE SUBMITTED BY TENDERER

NIT No. ESH/TONS/UNIT#3/T-01

S. no	Category	Manpower Deployment indicating no. of persons								
		Months								
		1 st	2 nd	3 rd	4 rd	5 th	6 th	7 th	8 th	Remark
1	Project Manager									-
2	F/Man./ Elect (Ex.MPPGCL/BHEL)									-
3	Supervisor									-
4	Winder Having at least 5 years' experience for erection and commissioning of Generator									
5	Highly Skilled / Skilled Workers									
	a) Welder/brazer UT Certified									
	b) Electrician atleast 5 year's experience for erection and commissioning of Generator									
	c) Fitter atleast 5 year's experience for erection and commissioning of Generator									
	d) Skilled Labour									-
6	Unskilled workers									-
7	Manpower of any other category required for the work									

SIGNATURE OF THE BIDDER WITH SEAL



External Services Hydro, BHEL Bhopal

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ANNEXURE -F

LIST OF MAJOR TOOLS AND TACKLES TO BE PROVIDED BY CONTRACTOR

NIT No. ESH/TONS/UNIT#3/T-01

Sl. No.	Name of equipment	Quantity Owned	Quantity proposed to be deployed for this job

SIGNATURE OF THE BIDDER WITH SEAL



External Services Hydro, BHEL Bhopal

ANNEXURE -G**DECLARATION SHEET****NIT No. ESH/TONS/UNIT#3/T-01**

I / We, (NAME OF THE FIRM)

..... hereby certify that, all the information and data furnished by me / us with regard to this Tender Specification (NIT No.)

..... are true and complete to the best of my / our knowledge. I / We have gone through the specification, conditions and stipulations in detail and agree to comply with the requirements and intent of specification.

I / We, further certify that I / we am / are the duly authorised representative(s) of the under mentioned tenderer and a valid power of attorney to this effect is also enclosed.

I / We, hereby declare that I / we shall treat the tender documents, drawings, specifications and other records connected with the work as secret / confidential and shall not communicate information / derived there from to any persons other than a person to whom I / We am / are authorised to communicate the same or use the information in any manner prejudicial to the safety of the same.

Tenderer's Name & Address:

SIGNATURE OF THE BIDDER WITH SEAL**External Services Hydro, BHEL Bhopal**

80264/2020/HEP-ESH95100

REF: NIT No. ESH/TONS/UNIT#3/T-01

Part-1: Technical Bid

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ANNEXURE -H**CERTIFICATE OF NO-DEVIATION (TECHNICAL)****NIT No. ESH/TONS/UNIT#3/T-01**

I/WE, M/s

hereby certify that notwithstanding any contrary indications/ conditions elsewhere in our offer documents, I/we have neither set any terms and conditions nor there is any deviation taken from the conditions of BHEL's tender specifications – technical other than mentioned below and I/we agree to all other terms and conditions mentioned in BHEL's tender specifications – technical with associated amendments and clarifications:

Sr.No.	Tender Spec. Ref doc.	Clause Reference	Clause description as appearing in tender document	Deviation(If any)
1.0				
2.0				
3.0				
4.0				
5.0				
6.0				
7.0				

SIGNATURE OF THE BIDDER WITH SEAL**External Services Hydro, BHEL Bhopal**

80264/2020/HEP-ESH95100

REF: NIT No. ESH/TONS/UNIT#3/T-01

Part-1: Technical Bid

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ANNEXURE -I**CERTIFICATE OF NO-DEVIATION (COMMERCIAL)****NIT No. ESH/TONS/UNIT#3/T-01**

I/WE, M/s

hereby certify that notwithstanding any contrary indications/ conditions elsewhere in our offer documents, I/we have neither set any terms and conditions nor there is any deviation taken from the conditions of BHEL's tender specifications – commercial other than mentioned below and I/we agree to all other terms and conditions mentioned in BHEL's tender specifications – commercial with associated amendments and clarifications:

Sr.No.	Tender Spec. Ref doc.	Clause Reference	Clause description as appearing in tender document	Deviation(If any)
1.0				
2.0				
3.0				
4.0				
5.0				
6.0				
7.0				

SIGNATURE OF THE BIDDER WITH SEAL**External Services Hydro, BHEL Bhopal**

80264/2020/HEP-ESH95100

REF: NIT No. ESH/TONS/UNIT#3/T-01

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ANNEXURE - J

CERTIFICATE CONFORMING KNOWLEDGE ABOUT SITE CONDITION**NIT No. ESH/TONS/UNIT#3/T-01**

I/We, M/s -----

hereby declare and confirm that we have visited the project site at Tons Hydroelectric project, Sirmour in Madhya Pradesh. as referred in BHEL's Tender Specification under reference above and acquired full knowledge and information about the site's conditions. We further confirm that the above information is true and correct and we shall not be eligible for any additional payment of any nature on account of lack of knowledge or non-familiarization of sites conditions.

SIGNATURE OF THE BIDDER WITH SEAL**External Services Hydro, BHEL Bhopal**

ANNEXURE -K**CONFIRMATION OF PARTICIPATION IN REVERSE AUCTION****NIT No. ESH/TONS/UNIT#3/T-01**

We, M/s _____

hereby declare and confirm that we possess the knowledge about the online process of reverse auction and if BHEL go for the reverse auction process for the finalisation of L1 party , as referred in BHEL's Tender documents, we have no objection to participate in the reverse auction process.

GENERAL TERMS AND CONDITIONS OF REVERSE AUCTION

Against this tender enquiry for the subject work with detailed scope of work as per NIT conditions and specifications BHEL will resort to "REVERSE AUCTION PROCEDURE" i.e. ON LINE BIDDING ON INTERNET.

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
3. BHEL will inform the contractor in writing in case of reverse auction the details of service provider to enable them to contact and get trained.
4. Business rules like event date, time, start price, bid decrement, extensions etc. also will be communicated through service provider for compliance.
5. Contractors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of reverse auction. Without this the contractor will not be eligible to participate in the event.
6. Reverse auction will be conducted on scheduled date & time.
7. At the end of Reverse Auction event, the lowest bidder value will be known on the network.
8. The lowest bidder has to fax the duly signed filled in prescribed format as provided on case to case basis to BHEL through service provider within 24 hours of Auction without fail.
9. Any variation between the on line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of the contractor to conduct business with BHEL as per prevailing procedure.



10. **On successful completion of Reverse Auction proceedings, the L1 bidder shall be required to submit detailed billing break up within 01 week by indicating unit rate against each and every item of the price schedule and the same shall be applicable with due approval from BHEL for processing payments.**
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry the price bids and price impacts if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice.

SIGNATURE OF THE BIDDER WITH SEAL



80264/2020/HEP-ESH95100

REF: NIT No. ESH/TONS/UNIT#3/T-01

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ANNEXURE -L**CERTIFICATE OF CONFIRMATION OF NOT BEING BLACK LISTED IN BHEL / MPPGCL****NIT No. ESH/TONS/UNIT#3/T-01**

(The bidder has not been black listed / prohibited/ banned by any BHEL unit / customer as on date.)

I / We, M/s _____ hereby declare and confirm that we have done the business with BHEL (name of the **unit/ units**).....and / or with MPPGCL **in the past and** our company / organization has not been black listed / banned / prohibited for doing the business by any of the above two units / organizations as on date.

OR

I / We, M/s _____ hereby declare and confirm that we have not done any business with BHEL(name of the unit/ units)/ or with MPPGCL till date and we / our company / organisation is for the first time applying for doing the business with them.

SIGNATURE OF THE BIDDER WITH SEAL**External Services Hydro, BHEL Bhopal**

ANNEXURE -M**AGREEMENT**

(To be executed on non-judicial stamp paper of appropriate value as per Government norms)

THIS AGREEMENT MADE THIS..... DAY OF 202.... between BHARAT HEAVY ELECTRICALS LIMITED, Bhopal (A Government of India Enterprise) a Company incorporated under the Companies Act 1956, having its registered office at BHEL House, Siri Fort, New Delhi – 110 049 (hereinafter called BHEL) of the ONE PART

AND

..... (hereinafter called the 'Contractor') of the SECOND PART.

WHEREAS M/s state that they have acquired and possess extensive experience in the field of and whereas in response to an Invitation to Tender No..... dated issued by BHEL for the execution of the Contractor submitted their offer dated..... And whereas BHEL has accepted the offer of the Contractor on terms and conditions specified in the Letter of Intent No..... dated..... read with the reference cited therein.

THIS AGREEMENT witnesses and it is hereby agreed by and between the parties as follows:

That the Contractor shall execute the work of and more particularly described in Tender specification (hereinafter called the said works) in accordance with and subject to terms and conditions contained in these presents, Instructions to Tenderers, General Conditions of Contract, Special Conditions, annexures, Letter of Intent

dated and such other instructions, drawings, specifications given to him from time to time by BHEL.

The Contractor is required to furnish to BHEL Security Deposit in the forms of cash/approved securities / Bank Guarantee valid upto for a sum of Rs..... (Rupees) towards satisfactory performance and completion of the Contract.

The Contractor has furnished a Guarantee bearing No..... Dated for a sum of Rs..... (Rupees) executed by Bank in favour of BHEL towards Security Deposit valid up to.....(The Contractor has furnished to BHEL an initial Security Deposit of Rs..... in cash /Approved



Securities/BG for Rs..... And has agreed for recovery of the balance security deposit by BHEL..... @ 10% of the value of work done from each running bill till the entire security deposit is recovered).

The contractor hereby agrees to extend the validity of the Bank Guarantee for such further period or periods as may be required by BHEL and if the contractor fails to obtain such extension (s) from the Bank, the contractor shall pay forthwith or accept recovery of Rs..... from the bills in one instalment and the Contractor further agrees that failure to extend the validity of the Bank Guarantee or failure to pay the aforesaid amount in the manner specified above shall constitute breach of contract. In addition to above. BHEL shall be entitled to take such action as deemed fit and proper for recovering the said sum of Rs.....

That in consideration of the payments to be made to the contractor by BHEL in accordance with this Agreement the Contractor hereby convenience and undertakes with BHEL that they shall execute, construct, complete the works in conformity, in all respects, with the terms and conditions specified in this Agreement and the documents governing the same.

That the Contractor shall be deemed to have carefully examined this Agreement and the documents governing the same and also to have satisfied himself as to the nature and character of the works to be executed by him.

That the Contractor shall carry out and complete the execution of the said works to the entire satisfaction of the Site-In-Charge or such other officer authorised by BHEL, within agreed time schedule, the time of completion being the essence of the Contract.

That BHEL shall, after proper scrutiny of the bills submitted by the Contractor, pay to him during the progress of the said works such sum as determined by BHEL in accordance with this Agreement.

That this Agreement shall be deemed to have come into force from the date on which the letter of intent has been issued to the Contractor.

That whenever under this contract or otherwise, any sum of money shall be recoverable from a payable by the Contractor, the same may be deducted in the manner as set out in the General Conditions of Contract or other conditions governing this Agreement.

That all charges on account of Octroi, Terminal and other Taxes including sales tax or other duties on material obtained for execution of the said works shall be borne and paid by the Contractor.

That BHEL shall be entitled to deduct from the Contractor's running bills or otherwise Income Tax under Section 194(C) of the Income Tax Act, 1961.



That BHEL shall be further entitled to recover from the running bills of the contractor or otherwise such sum as may be determined by BHEL from time to time in respect of consumables supplied by BHEL, hire charges for tools and plants issued (where applicable) and any other dues owed by the contractor.

That it is hereby agreed by and between the parties that non-exercise, forbearance or omission of any of the powers conferred on BHEL and/or any of its authorities will not in any manner constitute waiver of the conditions here to contained in these presents and the liability of the Contractor with respect to compensation payable to BHEL or Contractor's obligations shall remain unaffected.

It is clearly understood by the between the parties that in the event of any conflict between the Letter of Intent and other documents governing this Agreement, the provisions in the letter of intent shall prevail.

The following documents:-

- (a) Invitation to Tender No..... and the documents specified therein
- (b) Contractor's Offer No..... date.....
- (c) Letter of Intent No..... date
- (d)

shall also form part of & shall govern this Agreement.

IN WITNESS HEREOF, the parties hereto have respectively set their signature in the presence of:

(CONTRACTOR)
to be signed by a person holding a valid Power of Attorney

For and on behalf of BHEL, Bhopal

WITNESS: -

- 1.
- 2.



ANNEXURE -N

MODEL FORM OF BANK GUARANTEE (FOR SECURITY DEPOSIT)**(To be issued in non-judicial stamp paper of appropriate value as per Government norms)**

In consideration of the Bharat Heavy Electricals Limited, having its registered Office at BHEL House, Siri Fort, New Delhi (hereinafter called BHEL), having agreed to exempt (hereinafter called "the said Contractor (s)" from the demand, under the terms and conditions of the Agreement dated made between BHEL and for (hereinafter called "the said Agreement") of Security (name of work) deposit for the due fulfilment by the said contractor(s) of the terms and conditions contained in the said Agreement, on production of a bank guarantee for Rs..... (Rupees..... Only).

We, at the (indicate the name of the Bank), (hereinafter referred to as "the bank") request of contractor(s) do hereby undertake to pay to BHEL and amount not exceeding Rs..... against any loss or damage caused to or suffered or would be caused to or suffered by BHEL, by reason of any breach by the said contractor(s), of any of the terms or conditions contained in the said Agreement.

We, (indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from BHEL, stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by BHEL by reason of breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement or by reason of the contractor(s)'s failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....

We, (indicate the name of the Bank) undertake to pay to BHEL any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / supplier(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under these presents being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) / supplier(s) shall have no claim against us for making such payment.

We (indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of BHEL under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till BHEL certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before we shall be discharged from all liability under this guarantee thereafter.

We (indicate the name of the Bank) further agree with BHEL that BHEL shall have the fullest liberty without our consent and without affecting in any manner



our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the BHEL against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of BHEL or any indulgence by BHEL to the said Contractor(s) or by any such matter or thing whatsoever which under the Law relating to sureties would, but for this provision, have effect of so relieving us. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s) / Supplier(s).

We, (indicate the name of the Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of BHEL in writing.

Dated Day..... of 202

For

..... (indicate the name of the Bank)

Witness :

1. -----

2 -----

Note : The above format is drawn upon the model form jointly evolved by the Reserve Bank of India, the Indian Banker's Association and the Ministry of Finance, Government of India as circulated by Indian Banker's Association, Bombay vide their letter No. LA/14-61/7808 dated 1/5/1980 as such no deviations are acceptable.

To be issued in appropriate valid non-judicial stamp paper prevalent in the state where the same is executed which is to be certified by the Notary Public or any other competent officer of that state.



ANNEXURE-O**PROCEDURE-2.3 FOR CONDUCT OF CONCILIATION PROCEEDINGS**

1. The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided herein:
2. The party desirous of resorting to Conciliation shall send an invitation/notice in writing to the other party to conciliate specifying all points of Disputes with details of the amount claimed. The party concerned shall not raise any new issue thereafter. Parties shall also not claim any interest on claims/counterclaims from the date of notice invoking Conciliation till the conclusion of the Conciliation proceedings. If BHEL is to initiate Conciliation, then, the invitation to Conciliate shall be extended to the concerned Stakeholder in Format-30 hereto. Where the stakeholder is to initiate the Conciliation, the notice for initiation of Conciliation shall be sent in Format-31 hereto.
3. The party receiving the invitation/notice for Conciliation shall within 30 days of receipt of the notice of Conciliation intimate its consent for Conciliation along with its counter-claims, if any.
4. The Conciliation in a matter involving claim or counter-claim (whichever is higher) up to Rs 5 crores shall be carried out by sole Conciliator nominated by BHEL while in a matter involving claim or counter-claim (whichever is higher) of more than Rs 5 crores Conciliation shall be carried out by 3 Conciliators nominated by BHEL. The appointment of Conciliator(s) shall be completed and communicated by the concerned Department/Group of BHEL Unit/Division/Region/Business Group to the other party and the Conciliator(s) within 30 days from the date of acceptance of the invitation to conciliate by the concerned party in the Format-32. The details of the Claim, and counter-claim, if any, shall be intimated to the Conciliator(s) simultaneously in Format-29.
5. The Parties shall be represented by only their duly authorized in-house executives/officers and neither Party shall be represented by a Lawyer.
6. The first meeting of the IEC shall be convened by the IEC by sending appropriate communication/notice to both the parties as soon as possible but not later than 30 days from the date of his/their appointment. The hearings in the Conciliation proceeding shall ordinarily be concluded within two (2) months and, in exceptional cases where parties have expressed willingness to settle the matter or there exists possibility of settlement in the matter, the proceedings may be extended by the IEC by a maximum of further 2 months with the consent of the Parties subject to cogent reasons being recorded in writing.
7. The IEC shall thereafter formulate recommendations for settlement of the Disputes supported by reasons at the earliest but in any case within 15 days from the date of conclusion of the last



hearing. The recommendations so formulated along with the reasons shall be furnished by the IEC to both the Parties at the earliest but in any case, within 1 month from the date of conclusion of the last hearing.

8. Response/modifications/suggestions of the Parties on the recommendations of the IEC are to be submitted to the IEC within time limit stipulated by the IEC but not more than 15 days from the date of receipt of the recommendations from the IEC. 9. In the event, upon consideration, further review of the recommendations is considered necessary, whether by BHEL or by the other Party, then, the matter can be remitted back to the IEC with request to reconsider the same in light of the issues projected by either/both the Parties and to submit its recommendations thereon within the following 15 days from the date of remitting of the case by either of the Parties.
9. Upon the recommendations by the Parties, with or without modifications, as considered necessary, the IEC shall be called upon to draw up the Draft
10. Settlement Agreement in terms of the recommendations. 11. When a consensus can be arrived at between the parties only in regard to any one or some of the issues referred for Conciliation the draft Settlement Agreement shall be accordingly formulated in regard to the said Issue(s), and the said Settlement Agreement, if signed, by the parties, shall be valid only for the said issues. As regards the balance issues not settled, the parties may seek to resolve them further as per terms and conditions provided in the contract. 12. In case no settlement can be reached between the parties, the IEC shall by a written declaration, pronounce that the Conciliation between the parties has failed and is accordingly terminated.
11. Unless the Conciliation proceedings are terminated in terms of para 22 (b), (c) & (d) herein below, the IEC shall forward his/its recommendations as to possible terms of settlement within one (1) month from the date of last hearing. The date of first hearing of Conciliation shall be the starting date for calculating the period of 2 months.
12. In case of 3 members IEC, 2 members of IEC present will constitute a valid quorum for IEC and meeting can take place to proceed in the matter after seeking consent from the member who is not available. If necessary, videoconferencing may be arranged for facilitating participation of the members. However, the IEC recommendations will be signed by all members. Where there is more than one (1) Conciliator, as a general rule they shall act jointly. In the event of differences between the Members of IEC, the decision/recommendations of the majority of the Members of IEC shall prevail and be construed as the recommendation of the IEC.
13. The Draft Settlement Agreement prepared by the IEC in terms of the consensus arrived at during the Conciliation proceedings between the Parties shall be given by the IEC to both the parties for putting up for approval of their respective Competent Authority.



14. Authority viz. the Board Level Committee on Alternative Dispute Resolution & Competent Authority to the draft settlement agreement shall be obtained by the other party and informed to BHEL within 15 days of receipt of the final draft settlement agreement by it. Upon approval by the Competent Authority, the Settlement Agreement would thereafter be signed by the authorized representatives of both the Parties and authenticated by the members of the IEC.
15. In case the Draft Settlement Agreement is rejected by the Competent Authority of BHEL or the other Party, the Conciliation proceedings would stand terminated.
16. A Settlement Agreement shall contain a statement to the effect that each of the person(s) signing thereto (i) is fully authorized by the respective Party(ies) he/she represents, (ii) has fully understood the contents of the same and (iii) is signing on the same out of complete freewill and consent, without any pressure, undue influence.
17. The Settlement Agreement shall thereafter have the same legal status and effect as an arbitration award on agreed terms on the substance of the dispute rendered by an arbitral tribunal passed under section 30 of the Arbitration and Conciliation Act, 1996.
18. Acceptance of the Draft Settlement Agreement/recommendations of the Conciliator and/or signing of the Settlement Agreement by BHEL shall however, be subject to withdrawal/closure of any arbitral and/or judicial proceedings initiated by the concerned Party in regard to such settled issues.
19. Unless otherwise provided for in the agreement, contract or the Memorandum of Understanding, as the case may be, in the event of likelihood of prolonged absence of the Conciliator or any member of IEC, for any reason/incapacity, the Competent Authority/Head of Unit/Division/Region/Business Group of BHEL may substitute the Conciliator or such member at any stage of the proceedings. Upon appointment of the substitute Conciliator(s), such reconstituted IEC may, with the consent of the Parties, proceed with further Conciliation into the matter either de-novo or from the stage already reached by the previous IEC before the substitution.
20. The proceedings of Conciliation under this Scheme may be terminated as follows:
 - a. On the date of signing of the Settlement agreement by the Parties; or,
 - b. By a written declaration of the IEC, after consultation with the parties, to the effect that further efforts at conciliation are no longer justified, on the date of the declaration; or,
 - c. By a written declaration of the Parties addressed to the IEC to the effect that the Conciliation proceedings are terminated, on the date of the declaration; or,
 - d. By a written declaration of a Party to the other Party and the IEC, if appointed, to the effect that the Conciliation proceedings are terminated, on the date of the declaration; or,
 - e. On rejection of the Draft Settlement Agreement by the Competent Authority of BHEL or the other Party.
21. The Conciliator(s) shall be entitled to following fees and facilities:



S1 No	Particulars	Amount
1	Sitting fees	Each Member shall be paid a Lump Sum fee of Rs 75,000/- for the whole case payable in terms of paragraph No. 27 herein below.
2	Towards drafting of settlement agreement	In cases involving claim and/or counter-claim of up to Rs 5crores. Rs 50,000/- (Sole Conciliator) In cases involving claim and/or counter-claim of exceeding Rs 5 crores but less than Rs 10 crores. Rs 75,000 (per Conciliator) In cases involving claim and/or counter-claim of more than Rs 10 crores. Rs 1,00,000/- (per Conciliator) Note: The aforesaid fees for the drafting of the Settlement Agreement shall be paid on the, Signing of the Settlement Agreement after approval of the Competent Authority or Rejection of the proposed Settlement Agreement by the Competent Authority of BHEL.
3	Secretarial expenses	Rs 10,000/- (one time) for the whole case for Conciliation by a Sole Member IEC. Where Conciliation is by multi member Conciliators Rs 30,000/- (one time)- to be paid to the IEC
4	Travel and transportation and stay at outstation Retired Senior Officials of other Public Sector Undertakings (pay scale wise equivalent to or more than E-8 level of BHEL).	As per entitlement of the equivalent officer (pay scale wise) in BHEL.
	Others	As per the extant entitlement of whole time Functional Directors in BHEL. Ordinarily, the IEC Member(s) would be entitled to travel by air Economy Class
5	Venue for meeting	Unless otherwise agreed in the agreement, contract or the Memorandum of Understanding, as the case may be, the venue/seat of proceedings shall be the location of the concerned Unit / Division / Region / Business Group of BHEL. Without prejudice to the seat/venue of the Conciliation being at the location of concerned BHEL Unit / Division / Region / Business Group, the IEC after consulting the Parties may decide to hold the proceedings at any other place/venue to facilitate the proceedings. Unless, Parties agree to conduct Conciliation at BHEL premises, the venue is to be arranged by either Party alternately.



21. The parties will bear their own costs including cost of presenting their cases/evidence/ witness(es)/expert(s) on their behalf. The parties agree to rely upon documentary evidence in support of their claims and not to bring any oral evidence in IEC proceedings.
22. If any witness(es) or expert(s) is/are, with the consent of the parties, called upon to appear at the instance of the IEC in connection with the matter, then, the costs towards such witness(es)/expert(s) shall be determined by the IEC with the consent of the Parties and the cost so determined shall be borne equally by the Parties. 26.
23. The other expenditures/costs in connection with the Conciliation proceedings out of the lump sum fees of Rs 75,000/- for Sitting Fees, 50% shall be payable after the first meeting of the IEC and the remaining 50% of the Sitting Fees shall be payable only after termination of the conciliation proceedings in terms of para 22 hereinabove. 28.
24. The travelling, transportation and stay at outstation shall be arranged by concerned Unit as per entitlements as per Serial No. 4 of the Table at para 23 above, and in case such arrangements are not made by the BHEL Unit, the same shall be reimbursed to the IEC on actuals limited to their entitlement as per Serial No. 4 of the Table at Para 23 above against supporting documents.
25. The IEC Member(s) shall submit necessary invoice for claiming the fees/reimbursements.
26. The Parties shall keep confidential all matters relating to the conciliation proceedings. Confidentiality shall extend also to the settlement agreement, except where its disclosure is necessary for purposes of its implementation and enforcement or as required by or under a law or as per directions of a Court/Governmental authority/ regulatory body, as the case may be.
27. The Parties shall not rely upon or introduce as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the Disputes that is the subject of the Conciliation proceedings:
 - a. Views expressed or suggestions made by the other party in respect of a possible settlement of the Disputes;
 - b. admissions made by the other party in the course of the Conciliator proceedings;
 - c. proposals made by the Conciliator;
 - d. The fact that the other Party had indicated his willingness to accept a proposal for settlement made by the Conciliator.
28. The Parties shall not present the Conciliator(s) as witness in any Alternative Dispute Resolution or Judicial proceedings in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.



29. None of the Conciliators shall act as an arbitrator or as a representative or counsel of a Party in any arbitral or judicial proceeding in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.

30. The Parties shall not initiate, during the Conciliation proceedings, any arbitral or judicial proceedings in respect of a Disputes that is the subject matter of the Conciliation proceedings except that a Party may initiate arbitral or judicial proceedings where, in his opinion, such proceedings are necessary for preserving his rights including for preventing expiry of period of limitation. Unless terminated as per the provisions of this Scheme, the Conciliation proceedings shall continue notwithstanding the commencement of the arbitral or judicial proceedings and the arbitral or judicial proceedings shall be primarily for the purpose of preserving rights including preventing expiry of period of limitation.

31. The official language of Conciliation proceedings under this Scheme shall be English unless the Parties agree to some other language



NIT No. ESH/TONS/UNIT#3/T-01**LIST OF CONSORTIUM BANKS**

1. SBI
2. SBH
3. Canara Bank
4. PNB
5. BOB
6. SBT
7. Deutsche Bank
8. Citi Bank
9. HDFC
10. HSBC
11. SCB
12. ICICI
13. ABN Amro Bank N.V.
14. Corporation Bank
15. Syndicate Bank
16. Indian Bank
17. UCO Bank
18. Central Bank
19. Oriental Bank of Commerce
20. Kotak Mahindra Bank Limited
21. The Federal Bank Limited
22. United Bank of India
23. Vijaya Bank
24. Union Bank of India
25. Bank of India
26. Punjab & Sind Bank
27. Andhra Bank
28. Axis Bank



ANNEXURE-Q**INDEMNITY BOND**

(To be issued in Non-Judicial Stamp Paper of appropriate value as per Government norms)

WHEREAS THE (Name of the contractor) M/s. , having its registered office at, has taken the contract for tender NO..... & Contractor's Offer No.....but the sub-contractors have also to obtain licence under the contract Labour (Regulation & Certificate under Form-V of the said rules.

So on the request of (Name of the contractor) M/s.....M/s Bharat Heavy Electricals Limited, Bhopal has agreed to issue certificate in Form-V in respect of the sub-contractor mentioned below. M/s, therefore, undertake to fully indemnify the M/s Bharat Heavy Electricals Limited, Bhopal from any financial implication whatsoever that may arise due to the grant of certificate in respect of sub-contractors of (name of the contractor in Form-V under contract Labour (Regulation & Abolition) Act. 1970 and its amendments.

- 1.
- 2.
- 3.

Signature & seal of Contractor



External Services Hydro, BHEL Bhopal

ANNEXURE-R**FORMAT FOR (EFT) ELECTRONIC FUND TRANSFER**

You are requested to submit the information as per details along with the offer :

1. Name of the Supplier (Max 60 char)
2. Account No (Max 17 char)
3. Name of the bank, branch, city (Max 60, 40 and 20 characters respectively)
4. Branch Code (Max 5 char)
5. MICR Code (Max 30 char)
6. IFSC Code (Max. 30 char) [Every NEFT enabled bank / branch has a unique IFSC Code (Indian Financial Security Code)] This code may differ from RTGS IFSC code. Vendors / bidders are required to submit the information on firm's letter head. In addition to above information please also furnish the following details to enable faster clearance of bills.
7. E-Mail Address (Max 40 char)
8. Details of TIN No. (Max 11 char)

The successful bidder shall furnish the following information on their letterhead duly endorsed by the bank as per details given therein.



80264/2020/HEP-ESH95100

REF: NIT No. ESH/TONS/UNIT#3/T-01

Part-1: Technical Bid

Section 5: AANEXURES

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(ON VENDOR / CONTRACTOR LETTER HEAD ONLY)

To

M/s Bharat Heavy Electricals Limited
P.O. Piplani Bhopal (MP) 462022

VENDOR/
CONTRACTOR
CODE(S)

Dear Sir/Madam,

Sub : Authorization of our payment through EFT/NEFT/RTGS

We hereby authorize M/s BHEL Bhopal to make our payments through Electronic Fund Transfer System. The details for facilitating the payments are given below:

1. NAME OF THE BENEFICIARY : _____
2. ADDRESS : _____ PIN _____
3. TELEPHONE NO. WITH STD. CODE : _____
4. BANK PARTICULARS
 - A) BANK NAME : _____
 - B) BRANCH ADDRESS : _____ PIN _____
 - C) 9 DIGIT MICR CODE : _____
 - D) BANK ACCOUNTNO : _____
 - E) BANK ACCOUNT TYPE : SAVING CURRENT LOAN CASH CREDIT OTHERS (PL. SPECIFY) _____
 - F) IFSC CODE : _____ G) BRANCH CODE: _____

5. BENEFICIARY AUTHORISED E-MAIL ADDRESS :

I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or credit is not effected due to incomplete or incorrect information, I/We would not hold the Company responsible.

SIGNATURE & OFFICE STAMP

Name of the authorized Signatory: _____

Date : _____

Proposed Bank Certification: It is certified that above mentioned beneficiary holds a bank account No..... with our branch and the Bank particulars mentioned above are correct.

SIGNATURE & OFFICE STAMP

Name of the authorized Signatory: _____

Date : _____

No Objection Certification from Existing Bank (In case of change of Bank): we have no-objection w.r.t. further payment made by M/s BHEL in the above mentioned account. Bank details of the above mentioned beneficiary with our bank are as follows:

Account No: _____

Bank Address : _____

SIGNATURE & OFFICE STAMP

Please refer point no 7 of the instructions

Endorsement of the SDC (MM)/ PO Issuing Authority or WO Issuing Authority.

All original documents are to be forwarded to Dy. Manager/Finance/Cash Planning Section.**External Services Hydro, BHEL Bhopal**

Instructions for filling up the format

1. Details to be addressed to the followings
 - Contract awarding agency in case of work(s) contract and other contingent supplies
 - CDC/CRX in case of transporter
 - Medical MM incase of Medical Purchase
 - SDC/MM where the purchase order issued by MM
2. All details must be filled in capital letters
3. A cancelled blank cheque must be enclosed for verification of Account No, MICR and IFSC Codes.
4. Official Stamp along with designation must be affixed below the signature
5. Bank authorization is mandatory
6. All documents in original are to be submitted to BHEL.
7. In case of change of bank, no objection certificate is required from the existing bank on bank letterhead with suitable clarification.
8. Form with correction(s) or overwriting will not be accepted.



LIST OF TESTING EQPT, GENERAL T&P TO BE PROVIDED BY CONTRACTOR**Testing Equipments**

1. Power pack and sufficient numbers of jacks for core pressing and hydraulic wrench for core tightening.
2. Necessary equipment's i.e. heaters/ rectiformer for stator heating during stator core and winding testing /dry out of unit.
3. Micro Ohm meter for winding resistance measurement.
4. Phase Sequence tester.
5. ELCID test equipment with testing personnel
6. Auto transformer, cables etc for Impedance measurement of rotor poles.
7. Voltage drop & polarity check testing equipment for field coils.
8. HV test kit along with their accessories and testing personals.
9. Operation and minor maintenance of stator core flux transformer and core flux test kit and cables. (Core flux transformer, testing kit and cable shall be provided by BHEL).
10. Assistance in Tan delta test. (Testing equipment and testing personnel shall be provided by BHEL).
11. 5 KV megger for IR/PI measurement.

Sufficient quantity of general Tools and tackles (Required as per scope of work)

1. Set of D Spanner, ring spanner, box spanner (refer note)
2. Set of screw driver,
3. Set of Allen key (refer note)
4. Set of Hexa Blade
5. Set of Pipe wrench
6. Set of Slide Wrench
7. Set of Scrapper
8. Set of Hammer
9. Set of Chisel
10. Set of Die & Tap
11. Set of Drilling machine
12. Set of Drill bits
13. Set of Mechanical Jack(as required)
14. Set of Hydraulic Jack(as required)



15. Surface plate
16. Set of Chain pully block
17. Set of Grinder
18. Set of C Clamp
19. Set of cutting nozzle(welding)
20. Set of Nylon Hammer
21. Set of Nylon Sealing
22. Set of letter Punch
23. Set of Number Punch
24. Set of Hole Punch
25. Set of Plier
26. Set of file
27. Measuring Tape
28. Set of Dial Gauge
29. Measuring Scale
30. Height gauge
31. Set of Vernier calliper
32. Set of stick Micrometer
33. Set of inside and outside micrometer
34. Set of Measuring Scale, tape
35. Water level manometer.
36. Set of Painting Brush, airless spray gun, spray gun
37. Grit blasting/ shot blasting machine
38. Compressor for cleaning and spary painting
39. Glass Tape, Mica Tape, Cotton Tape for minor repair
40. Rustalene (as required)
41. Oil Stone (as required)
42. Set of Engg. Blue
43. Set of Teflon Tape
44. Set of Locktite
45. Holdtite (as required)
46. Brazing Torch(as required)
47. Cylinder Key
48. Drill Key (as required)
49. Set of Filler Gauge)
50. Set of Drill Bit
51. Set of Wire Brush
52. Gas cutting wire (as required)
53. Set of Gas Cutting Nozzle



54. Set of Cutting Disc
55. TIG Welding set
56. DC welding generator
57. Welding transformer
58. Set of Grinding Disc
59. Set of DP test kit
60. M Seal (as required)
61. 500 V hand Meggar
62. KV motorised meggar
63. Set of Wire Silling
64. Set of nylon sling
65. Set of stud Rod
66. Set of Hand Lamp
67. Cloth (as required)
68. Cotton Waste (as required)
69. Set of Switch Board
70. Set of Halogen Lamp
71. Set of Copper Rod
72. Set of Copper Plate
73. Set of Drill Sleeve
74. Asbestos Cloth (as required)
75. Portable Oven (as required)
76. Straight Edge (as required)
77. Set of Goti
78. Set of O Ring
79. Set of Blower
80. Red Paint (as required)
81. Black Paint (as required)
82. Yellow Paint (as required)
83. Thinner / Kerosene (as required)
84. Set of Hammer Ring
85. Set of Eye Bolt
86. Molicote (as required)
87. Set of Shim Cutter
88. Set of Gouging Rod
89. Welding Lead and welding holder(as required)
90. Welding Electrodes Heating oven
91. M.S. & S.S. Electrodes (as required)
92. Cutting Electrode (as required)



93. Master Level
94. Set of Outside Micrometer
95. Inside Micrometer (as required)
96. Slip Gauge (as required)
97. Set of Allen Key
98. Right Angle (as required)
99. Set of Filler gauge
100. Set of Bur Cutter
101. All Welding Related Accessories
102. All Gas Cutting Accessories
103. All Grinding Accessories
104. Set of Scissor
105. Marken Cloth (as required)
106. Set of Depth Gauge
107. Set of Depth Gauge
108. Theodolite
109. Set of Torque Wrench (as required)
110. Hydraulic Testing Pump for Water (as required)
111. Hydraulic Testing Pump for Oil (as required)
112. Set of D-Sackle (as required)
113. Set of Turn Buckle (as required)
114. Sand Paper /Emric Cloth (as required)
115. Spirit Level (as required)
116. Wooden Plank / Slipers (as required)
117. Stop Watch
118. Knife
119. Solder Rim
120. Vacuum Cleaner
121. Wire Stripper
122. Wire Crimping Tool
123. Non-Contact Type Digital Techometer
124. Digital Multimeter
125. Phase Sequence Meter
126. Tong Tester
127. Set of Safety Halmet
128. Set of Welding Glass / Mask
129. Set of Leg Plier /Guard
130. Set of Hand Gloves Cotton / Leather
131. Set of Nose / Ear Mask



- 132. Set of Hand Sleeve
- 133. Set of Dangri / Apron
- 134. Set of Safety Shoes /Gum Boots
- 135. First Aid Box
- 136. Angle grinder
- 137. Straight grinder
- 138. Shim Cutting tool
- 139. Vacuum cleaner
- 140. 24V transformer for lighting with bulbs and bulb holder
- 141. Safety apron, goggle, boots & helmet for workers

NOTE: Contractor shall arrange spanners of 'D', ring and allen key set of both metric system as well as of British system fasteners as the project is very old and some of the fasteners may be of British system. Contractor should arrange spanners to fasten up to M56 sizes.



ANNEXURE T**TAXES**

- 1 Wherever bidders are required to supply services at project site Party has to submit GST registration no. of the State in which project site is located along with copy of registration certificate at the time of submission of Bid. In case the same is not available at the time of submission of bid, the contractor has to give an undertaking that the same will be arranged before award of work order.
- 2 HSN Code/SAC, rate of tax under GST and applicable GST (IGST, CGST/SGST/UTGST) and GSTIN shall be clearly mentioned by the Bidder.
- 3 GST portion of the invoice shall be released only upon:-
 - 2.2.1 All invoices raised by contractors/vendors must be GST compliant Tax invoices as per GST invoice rules.
 - 2.2.2 Contractor declaring such invoice in his GSTR-1 or any modified return as notified by government
 - 2.2.3 Receipt of goods/services and Tax Invoice by BHEL and
 - 2.2.4 Confirmation of payment of GST thereon by contractor on GSTN portal
 - 2.2.5 Alternatively, Contractor has to submit BG (through SFMS) of appropriate value which shall be valid at least one month after the confirmation of date of payment of GST by contractor on GSTN portal and receipt of Tax invoice and receipt of services, whichever is later. Contractor has to give an undertaking in this regard.
 - 2.2.6 Contractor has to give an undertaking to BHEL that they have declared invoice in his return and paying GST within timeline prescribed for availing ITC by BHEL.

Payment to Contractor for GST portion will be released only after completion of above activity and on availment of ITC by BHEL.
- 4 In case GST credit is delayed/denied to BHEL due to non/delayed receipt of services/goods and /or tax invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons not attributable to BHEL, GST amount shall be recoverable from the contractor along with interest levied/ leviable on BHEL.

Reverse Charge under GST

- 5 In respect of services, reverse charge liability shall arise at the earliest of date of payment to service provider or 60 days from the date of issue of invoice by service provider. Contractor has to submit bill for payment within 30days from the date of invoice. Any interest or penalty implications attributable to the contractor shall be recovered from them.
- 6 Any GST liability arising on BHEL under reverse charge before actual receipt of goods and/or invoice thereof would be subject to recovery of interest leviable for the period between the date of such liability and actual date of eligibility of ITC based on receipt of goods, receipt of invoices and other condition specified in GST Law.



Liquidated Damage/Penalty

7 Liquidated damage (LD) or Penalty if chargeable from suppliers/contractors as per NIT, applicable GST will be charged in addition to the same.

Tax Deduction at source

8 TDS as per extent provisions of the GST Law shall be deducted from supplier/contractor bill.



NIT No.: ESH/TONS/UNIT#3/T-01

Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

PART-2: PRICE BID



PRICE BID

Title of Work : Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL.

NIT No. ESH/TONS/UNIT#3/T-01

S1 No	Schedule	Description	Amount in Rs.
1	A	Dismantling of Unit.	10%
2	B	Rectification / Refurbishment/ overhauling work of generator.	20%
3	C	Rectification / Refurbishment / overhauling work of turbine.	15%
4	D	Trial assembly of major turbine components.	5%
5	E	Final erection / Re-assembly work – turbine.	10%
6	F	Final erection / Re-assembly work – generator	10%
7	G	Box-up activities.	5%
8	H	Pre commissioning / mechanical spinning/ commissioning tests, synchronization of unit and handing over of the machine to customer after 72 hours of trial run.	15%
9	I	Defect liability	10%
		TOTAL OF SERVICES (%)	100%
	Quoted price	Grand Total of price Quoted for work as per Schedule A to I (in figures) Rs.	
	Quoted price	Grand total of price Quoted for work as per Schedule A to I (in words) Rs.	

NOTE:

- ONLY GRAND TOTAL PRICE OF THE COMPLETE PACKAGE TO BE QUOTED.**
- Rate per unit for different items of the Price Schedule shall be derived from the percentage value assigned to that particular item and qty specified in the price schedule.
- The price quoted by the bidder shall be inclusive of all taxes and duties except for GST tax applicable on service portion of the works, which shall be reimbursed to the contractor at rate prevailing at the time of services rendered.
- The L1 bidder shall be decided on the basis of price quoted for complete package. BHEL reserves right to decide L1 bidder through Reverse Auction Process.
- Activities pertains in schedule A to I if not performed/ deleted / not required during final execution of work shall not be liable for payment.
- In case of price bid tie of 2 or 3 bidders, then the L1 bidder shall be decided on the basis of maximum average turnover of the last 3 years earned by the bidder ending on 31st March,2020.

SIGNATURE OF THE BIDDER WITH SEAL



80264/2020/HEP-ESH95100

REF NIT No. ESH/TONS/UNIT#3/T-01

PART-II: PRICE BID

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BILLING BREAK-UP OF R&M ACTIVITIES

Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

NIT No. ESH/TONS/UNIT#3/T-01**SCHEDULE - A****DISMANTLING**

Sl. No.	Description	Unit	Qty.	% of total value
A1	Dismantling of generator as per NIT clause no 4.4.1.1	set	1	3.0
A2	Dismantling of turbine as per NIT clause no 4.4.1.2	set	1	7.0
	Total			10.0

SIGNATURE OF THE BIDDER WITH SEAL

**External Services Hydro, BHEL Bhopal**

80264/2020/HEP-ESH95100

REF NIT No. ESH/TONS/UNIT#3/T-01

PART-II: PRICE BID

104

Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

NIT No. ESH/TONS/UNIT#3/T-01

SCHEDULE - B

Rectification /Refurbishment work of Generator

Sl. No.	Description	Unit	Qty.	% of total value
B1	Rectification of core as per NIT clause no 4.4.2.1	set	1	5.0
B2	Winding of stator as per NIT clause no 4.4.2.2	set	1	10
B3	Rectification & re-assembly of rotor in service bay as per NIT clause no 4.4.2.3	set	1	2.5
B4	Overhauling of balance generator parts as per NIT clause no 4.4.2.4	set	1	2.5
	TOTAL			20.0

SIGNATURE OF THE BIDDER WITH SEAL



External Services Hydro, BHEL Bhopal

80264/2020/HEP-ESH95100

REF NIT No. ESH/TONS/UNIT#3/T-01

PART-II: PRICE BID

105

WorkRectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

NIT No. ESH/TONS/UNIT#3/T-01

SCHEDULE - C

Rectification/Refurbishment/overhauling work – Turbine

Sl. No.	Description	Unit	Qty.	% of total value
C1	Rectification/Refurbishment/overhauling work – Turbine as per NIT clause no 4.4.3	Set	1	15.0
	TOTAL			15.0

SIGNATURE OF THE BIDDER WITH SEAL



External Services Hydro, BHEL Bhopal

80264/2020/HEP-ESH95100

REF NIT No. ESH/TONS/UNIT#3/T-01

PART-II: PRICE BID

106

Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

NIT No. ESH/TONS/UNIT#3/T-01**SCHEDULE - D****TRIAL ASSEMBLY**

Sl. No.	Description	Unit	Qty.	% of total value
1	Trial assembly of major turbine components as per NIT clause no 4.4.4	Set	1	5.0
	TOTAL	Set	1	5.0

SIGNATURE OF THE BIDDER WITH SEAL

**External Services Hydro, BHEL Bhopal**

Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

NIT No. ESH/TONS/UNIT#3/T-01

SCHEDULE - E

FINAL RE-ASSEMBLY – TURBINE

Sl. No.	Description	Unit	Qty.	% of total value
E1	Final erection / re-assembly work – turbine as per NIT clause no 4.4.5	Set	1	10.0
	TOTAL	Set	1	10.0

SIGNATURE OF THE BIDDER WITH SEAL



80264/2020/HEP-ESH95100

REF NIT No. ESH/TONS/UNIT#3/T-01

PART-II: PRICE BID

108

Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

NIT No. ESH/TONS/UNIT#3/T-01

SCHEDULE - F

FINAL RE-ASSEMBLY – GENERATOR

Sl. No.	Description	Unit	Qty.	% of total value
F1	Final erection / re-assembly work – Generator as per NIT clause no 4.4.6	Set	1	10.00
	Total	Set	1	10.00

SIGNATURE OF THE BIDDER WITH SEAL



External Services Hydro, BHEL Bhopal

Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

NIT No. ESH/TONS/UNIT#3/T-01

SCHEDULE - G

BOXING UP OF UNIT

Sl. No.	Description	Unit	Qty.	% of total value
G1	Boxing up of unit as per NIT clause no 4.4.7	Set	1	5.0
	TOTAL	Set	1	5.0

SIGNATURE OF THE BIDDER WITH SEAL



80264/2020/HEP-ESH95100

REF NIT No. ESH/TONS/UNIT#3/T-01

PART-II: PRICE BID

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Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

NIT No. ESH/TONS/UNIT#3/T-01

SCHEDULE - H

Pre-commissioning, commissioning, synchronisation & handing over

Sl. No.	Description	Unit	Qty.	% of total value
H1	Pre commissioning checks and mechanical spinning of as per NIT clause no 4.4.8	Set	1	5.0
H2	Commissioning tests, synchronization of unit and handing over of the machine to customer after 72 hours of trial run as per NIT clause no 4.4.8	set	1	10.0
		Set	1	15.0

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External Services Hydro, BHEL Bhopal

Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

NIT No. ESH/TONS/UNIT#3/T-01

SCHEDULE - I

DEFECT LIABILITY

Sl. No.	Description	Unit	Qty.	% of total value
I1	Defect Liability Defect liability coverage for 12 months after handing over of machine to customer	set	1	10.0
	TOTAL	Set	1	10.0
	To be released after the defect liability / guarantee period is over.			

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Rectification & refurbishment of damages and execution of dismantling, rectification, assembly of Stator Core, Winding & Rotor Poles etc along with capital overhauling work of turbine and generator and testing & commissioning of Unit#3 at 3x105 MW Tons HPS, MPPGCL

NIT No. ESH/TONS/UNIT#3/T-01

ILLUSTRATION FOR ARRIVING RATE OF A PARTICULAR ITEM

S1 No	Activity / Method
1	Suppose we want to calculate unit rate of item 1 of Price Schedule A
2	Let the price quoted by the bidder for complete package under summary of Prices is Rs. 100 .
3	As per summary of Prices the weightage of Price Schedule A is 10 %
4	Hence the value of Price schedule A is Rs. 10.
5	As per Price Schedule A the weightage of item 1 is 3% of total services
6	Hence the total value of item 1 of Price Schedule A will be Rs. 3.00
7	Units rate shall be arrived at considering the total value assigned against each activity divided by the respective quantity

SIGNATURE OF THE BIDDER WITH SEAL

