

TENDER SPECIFICATION

FOR

**Erection, Installation and Commissioning support in all BHEL supplied
Equipment including complete cable harnessing & wiring of coaches, CCTV
Installation, Pre Commissioning Checks and Commissioning of 25kV AC 3 Phase
Electrics for MEMU Rakes**

AT

MODERN COACH FACTORY

RAEBARELI



(A Govt. of India Undertaking)

ELECTRONICS DIVISION

PO BOX. 2606, MYSORE ROAD, BANGALORE 560026

Volume	Description
NIL	Tender Specification IssueDetails
NIL	Notice Inviting Tender
Part – I	Techno Commercial Bid
Part – I	Technical Conditions ofContract
Part – I	General Conditions ofContract
Part – I	Forms & Procedures
Part-II	Price Bid Specification

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भारत हेवी इलेक्ट्रिकल्स लिमिटेड

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Bharat Heavy Electricals Ltd.,

(A Government of India undertaking)

Electronics Division

PB 2606 , Mysore Road, Bangalore- 560026 INDIA

An ISO-9001, ISO 14001 & OHSAS 18001 Company.

NOTICE INVITING TENDER

TENDER No.: BHEL-EDN/PES-SS/MCF MEMU/PROTOTYPE/2022-23/01 dated 25.01.2023

Scope of Work : Erection , Installation and Commissioning support in all BHEL supplied Equipment including complete cable harnessing & wiring of coaches, Pre Commissioning Checks , CCTV Installation and Commissioning of 25kV AC 3 Phase Electrics for MEMU Rakes AT MODERN COACH FACTORY, Raebareli

Sealed offers in two part bid system are invited from reputed and experienced bidders (meeting PRE-QUALIFYING CRITERIA as mentioned in the enclosed tender document.

Please submit the offer on or before the due date.

Thanking You.

Yours faithfully,

For Bharat Heavy Electricals Limited

(Vijayakumar M.)

DGM PES/SS

NOTICE INVITING TENDER (NIT)

TENDER REFERENCE NO & DATE	BHEL-EDN/PES-SS/MCF MEMU/PROTOTYPE/2022-23 /01 Dt.25.01.2023
BROAD SCOPE OF JOB	ERECTION, INSTALLATION AND COMMISSIONING SUPPORT INCLUDING COMPLETE CABLE HARNESSING & WIRING , CCTV INSTALLATION , MSU PREPARATION & MOUNTING OF 25KV AC 3PHASE ELECTRICS FOR MEMU RAKES FOR MCF RAIBARELI PROJECT .
PLACE OF WORK	Modern Coach Factory, Raebareli (Uttar Pradesh)- 600038
Period of Work	24 months from the date of award of contract
Tender Type	Open Tender (Two Part Bid)
Earnest Money Deposit (EMD)	INR 80290.00
Value of Work	INR 40,14,280.00
DUE DATE & TIME OF OFFER SUBMISSION on or BEFORE	13/02/2023 , 13:00 Hrs.
DATE AND TIME OF TECHNICAL BID OPENING	Date : 13/02/2023 13.30Hrs (1) In case the due date of opening of tender becomes a non-working day, tenders shall be opened on next working day at the same time. (2) Bidder may depute representative to witness the opening of tender with authority letter
CONTACT PERSONS	Mr. VIJAYAKUMAR M, DGM /Mobile: 9845402722 Mr. C S DEOLIKAR ,AGM / Mobile 9920775139
Address for Submission of completed Tender	Submission of EMD including Tender Documents should be sent in original through R.P.A.D / Speed post / hand delivery / Courier/e-tender in pdf form, so as to reach the office of Offer inviting Authority. Mr. M. VIJAYAKUMAR DGM, PES, NEB 5th FLOOR, BHEL EDN, P.B. No. 2606, Mysore Road, Bangalore –560026. Phone: 080-26998346, 9845402722 <u>Or</u> Drop duly filled in tender document within the specified date and time in the Tender Box no:11 (at BHEL- EDN Reception for PES Dept.) PES- Traction Services BHEL - Electronics Division P.B. No: 2606, Mysore Road, Bengaluru – 560026, Karnataka, INDIA

Contact Details for Queries related to this tender.	Mr. VIJAYAKUMAR M, DGM /Mobile: 9845402722 Mr.C S DEOLIKAR ,AGM / Mobile :9920775139
LATEST UPDATES	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted only in BHEL webpage www.bhel.com . (Tender Notifications- View Corrigendum and www.bheledn.com) and not in the newspapers. Bidders to keep themselves updated with all such information. No separate communication to individuals shall be sent regarding this.
LAST DATE FOR SEEKING CLARIFICATION	At least 5 days before the due date of offer submission along with soft version addressing to undersigned & others as per contact address given below. AGM(PES-Site Service) BHEL -ELECTRONICS DIVISION , PBNO. 2606, MYSORE ROAD BANGALORE. Phone: 080-26998375 , 9920775139 / 080-26998346 , 9845402722 e-mail: csdeolika@bhel.in / vijayakumarm@bhel.in

PART -I : TECHNO - COMMERCIAL BID

i) **INFORMATION PART:-**

All the details in the below table shall be filled by bidder.

SL NO	Particulars	To be filled by Bidder
1	Name and Address of the Tenderer	
2	Details about type of the Firm/Company	
3	Details of Contact person for this Tender	Name :
		Designation:
		Telephone No.
		Mobile No.
		E-Mail ID :
		Fax No:
4		Name :

	Details of alternate Contact person for this tender	Designation:	
		Telephone No.	
		Mobile No.	
		E-Mail ID :	
		Fax No:	
5	Telephone Number	Office :	
		Residence :	
		Mobile No. :	
		E-Mail ID :	
6	CONSTITUTION OF FIRM	INDIVIDUAL/ SOLE PROPRIETORSHIP CONCERN/PARTERSHIP FIRM / PUBLIC LIMITED COMPANY / PRIVATE LIMITED COMPANY	
7	EMD DETAILS	DD No:	
		Date :	
		Bank :	
		Amount:	
		Please tick (√) whichever applicable:-ONE TIME EMD / ONLY FOR THIS TENDER	
	STAFF STRENGTH Technical Staff Details (Use separate sheet if reqd.) Working Staff Details (Use separate sheet if reqd)		
	List of Plant and Equipment		
8	PAN NUMBER		
9	GST NUMBER from which Billing will be done		
10	Validity of Offer	The offer shall be valid for THREE months from the due date of Technical Bid opening	

PRE – QUALIFICATION CRITERIA (PQC)

Bidders shall submit their response against eachpoint with supporting documents and offers not complying with any of the PQC will be rejected.

A . ESSENTIAL PRE QUALIFICATION :

S. No	Particulars	To be filled by Bidder
1.0	Experience of having successfully completed similar work during last seven years ending last day of month previous to the one in which applications are invited should be either of the following : <i>Similar Work :</i> Complete wiring works including installation of at least any of the equipment viz. control/power panels, Alternators/D-engines, lights/fans, IV couplers, RMPUs/AHUs, emergency batteries, transformers, traction motors, converters etc. pertaining to all types of coaches of ACEMU/MEMU/DEMU/DETC/SPART/LHB power cars at ICF/RCF/CLW/BLW/DMW/MCF commissioning hubs of Indian Railways . (Copy of completion certificate along with WO/PO copy from the organization where the work is executed/being executed is to be enclosed. Submission of only WO/PO copy is not adequate) With respect to Railways, the credentials and completion certificate should have been issued by at least a JA Grade Officer. With respect to other Government Departments and Public Sector Undertakings (PSUs), the certificate issued at the level of Engineer and above can be taken as valid. Certificates issued by private individuals for the completion of the work will not be considered. However, if vendor have executed the work through sub-contractor of main contractor to whom Purchase order is placed by Railways, then vendor has to provide the documentary proof (like PO copy from main contractor, authorization letter from main contractor to execute the work and proof of payment etc) that they have executed the works.	
	a) One similar completed work costing not less than Rs.32,11,424.00 each . OR	Enclosed / Not enclosed
	b) Two similar completed works costing not less than Rs. 20,07,140.00 each OR	Enclosed / Not enclosed
	c) Three similar completed works costing not less than Rs.16,05,712.00 each	Enclosed / Not enclosed

	d) Average Annual financial Turnover during the last three years ending 31 st March of previous financial year should be at least Rs.12,04,284.00	
2.0	Average Annual Financial turnover during the last three years (from the tender opening date) ending 31 st March of previous financial year .	Rs
2.1	Turn over - Previous financial year (2020-21)	Rs
2.2	Turn over - 1 year before previous financial year (2019-20)	Rs
2.3	Turn over – 2 years before previous financial year (2018 - 19)	Rs
3.1	Audited profit and Loss Account for FY 2018-19 (relevant pages to be enclosed)	Enclosed / Not Enclosed
3.2	Audited profit and Loss Account for FY 2019-20 (relevant pages to be enclosed)	Enclosed / Not Enclosed
3.3	Audited profit and Loss Account for FY 2020-21(relevant pages to be enclosed)	Enclosed / Not Enclosed
4.0	Experience Certificate/performance report for successful work completion /execution in progress etc. , Billing done during contract period duly certified by contract awarding firm to arrive at competency of firm)	Enclosed / Not Enclosed

OTHER CRITERIAS

S. No	Particulars	To be filled by Bidder
1.0	a) Whether the scope of work is understood clearly by the bidder?	Understood / Not Understood
	b) Whether the bidder is ready to comply with all the terms and conditions & the work can be accomplished without any issues?	Accepted / Not Accepted
2.0	Whether the bidder accepts to execute in total?	Yes / No
5.0	Whether the organization is a registered one? Copy of registration with date of establishment / registration certificate shall be furnished.	YES/NO
5.1	Whether Registered with ESI / PF Authority	Yes/ No
5.2	If Yes, indicate PF Registration No (Copy of last month contribution paid receipt to be enclosed)	
5.3	If Yes, indicate ESI Registration No. (Copy of last month contribution paid receipt to be enclosed)	
5.4	If No, Workmen compensation policy to be produced before commencement of work. Is the tenderer willing to pay the ESI and PF contribution subject to BHEL Terms and conditions.	Yes/ No
6.0	Security Deposit Clause as per NIT	Acceptable/Not Acceptable
7.0	The bidder should have office in the area where MCF is located with land line/mobile telephone and E-mail for emergency contact.	

	Please provide address, Phone numbers & E-mail ID.	
7.1	In case there is no office, the bidder is ready to open office at the location	Yes/ No
8.0	Whether tools and tackles with storage cabinets to be put up inside MCF (as given in the scope of work) will be supplied by contractor?	Yes/ No
	MANPOWER – Adequate manpower depending on the work should be provided at site consisting of Engineers , Supervisors and technicians having qualification in Electrical / Electronics / Instrumentation / Mechanical Field If more number of persons shall be required to complete the work, the same shall be provided and work shall be completed without any delay. Whether the bidder will be able to supply the above manpower?	YES / NO
9.0	PAYMENT - Payment will be made based on the completion of activities as mentioned in the tender in subsequent clauses . Whether the above payment term is acceptable by bidder?	Yes/No

OTHER CONDITIONS

10.0	Mode of EMD furnished (Cheque is not acceptable)	SB Collect/DD/ Pay Order/EFT in BHEL Account
10.1	Particulars (Receipt No. and Date)	Acceptable/ Not Acceptable
11	General Conditions of Contract & NIT	Acceptable/ Not Acceptable

12	Contract period mentioned in NIT	Acceptable/ Not Acceptable
13	Payment Terms defined in NIT	Acceptable/ Not Acceptable
14	EFT form signed & sealed by banker in original is enclosed	Enclosed / Not enclosed
15	Cancelled cheque or photocopy of cheque enclosed	Enclosed / Not enclosed
16	GST registration No. of Tenderer (Copy of the same to be enclosed)	Enclosed / Not enclosed
17	Indemnity bond to be submitted by bidder after award of contract	Acceptable/Not Acceptable
18	If MSE vendor, documents shall be submitted. In case of non-submission of supporting documents, the bidder shall be considered as non/MSE.	Enclosed/Not Enclosed/Not Applicable
19	Declaration Of Acceptance To Terms & Conditions	Enclosed / Not enclosed

		APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER
20	Whether the format for compliance with PRE QUALIFICATION CRITERIA is understood and filled with proper supporting documents referenced in the specified format	Applicable	YES / NO
21	Audited profit and Loss Account for the last three years	Applicable	YES/NO
22	Copy of PAN Card	Applicable	YES/NO
23	Whether all pages of the Tender documents including annexures, appendices etc are read understood and signed	Applicable	YES/NO
25	Declaration by Authorized Signatory	Applicable	YES/NO
26	No Deviation Certificate	Applicable	YES/NO
27	Declaration confirming knowledge about Site Conditions	Applicable	YES/NO
28	Declaration for relation in BHEL	Applicable	YES/NO
29	Non Disclosure Certificate	Applicable	YES/NO
30	Bank Account Details for E-Payment	Applicable	YES/NO
31	Capacity Evaluation of Bidder for current Tender	Applicable	YES/NO
32	Tie Ups/Consortium Agreement are submitted as per format	Applicable	YES/NO
33	Power of Attorney for Submission of Tender/Signing Contract Agreement	Applicable	YES/NO
34	Analysis of Unit rates	Applicable	YES/NO

1. INSTRUCTIONS TO TENDERERS

1.1 Sealed Tenders for the above noted works are hereby invited from Contractors

experienced in works of similar kind and magnitude.

1.2 Tender shall be submitted in two parts, i.e. (I) Techno-Commercial bid and (II) Price Bid.

1.2.1 **Techno-Commercial bid** shall be submitted confirming acceptance to all the clauses indicated in this Tender along with EMD and all enclosures as required by the Tender and any other which the Tenderer wish to submit. Tenderers shall also sign each and every page of the Tender document attached thereto before submitting Tender.

ENVELOPE – I super scribed as :

PART-I (TECHNO COMMERCIAL BID)

TENDER NO :

NAME OF WORK:

DUE DATE OF SUBMISSION:

DETAILS OF THE BIDDER WITH ADDRESS:

1.2.2 **Price Bid** duly filled & signed with seal, must be put in another separate sealed envelope super scribed with Tender reference and 'Price Bid'. Price bid envelope must contain only the rates and amount to be quoted in figures and words in format enclosed in Price schedule: Part- II which is enclosed hereto.

ENVELOPE-II: super scribed as:

PART-II (PRICE BID)

TENDER NO :

NAME OF WORK:

DUE DATE OF SUBMISSION:

DETAILS OF THE BIDDER WITH ADDRESS:

MAIN ENVELOPE-III OUTER ENVELOPE : superscribed as: TECHNO-COMMERCIAL BID, PRICE BID & EMD :

TENDER NO:

NAME OF WORK:

DUE DATE OF SUBMISSION:

DETAILS OF THE BIDDER WITH ADDRESS:

2. SPECIAL NOTE FOR TENDER SUBMISSION:

All documents/ annexures submitted with the offer shall be properly annexed and placed in respective places of the offer as per enclosure list mentioned in the covering letter. BHEL shall not be responsible for any missing documents.

2.1 The bidders are required to submit / drop duly filled in tender document within the specified date and time in the tender box (Box No.11 for PES dept) kept in Reception Area of BHEL – Electronics Division, Mysore road, Bangalore – 560 026. Tenders received after the due date & time of opening of tenders will not be accepted. All the tenderers may witness the opening of the bids with due authorization of the person witnessing from the authorized signatory of the tenderer.

2.2 The tender documents are available in the BHEL web site: www.bhel.com / Central Public Procurement Portal: eprocure.gov.in under heading Tender Notifications. Corrigendum if any including extension of due date, clarification etc., will be published in BHEL web site only.

2.3 All entries in the tender documents should be in one ink. Eraser and overwriting are not permitted.

2.4 Tenders should be addressed to AGM / DGM (PES), Electronics Division, Bharat Heavy Electricals Limited, Mysore Road, Bangalore – 560 026. The full name and address of the tenderer, name of the work and the date of opening should be indicated on the cover.

2.5 The local address of the Contractor, the name of the person to whom all the correspondence are to be addressed, should be indicated with telephone number (both office and residence), FAX /e-mail address, Mobile phone No. etc.

2.6 Tenderers shall fill in all the required particulars in the blank spaces provided for this purpose in the tender documents and also sign each and every page of the tender document including the drawings (wherever applicable) attached there to before submitting tender.

2.7 Rates should be quoted in figures as well as in words in Indian Currency only i.e. Rupees with reference to each item and for all the items shown in the attached schedule. The rates shall include all taxes and duties payable on account of Service Tax, Sales Tax etc., and also expenses towards PF and ESI contributions . The tenderers shall fill amount of each item and the total on each sheet as also the grand total amount of the whole contract.

2.8 Non-conformities between figures and words of the quoted prices: Sometimes, non-conformities/errors are also observed between quoted prices in figures and that in words. The same is to be taken care of as indicated below:

2.8.1 If in the price structure quoted for the required services, there is discrepancy between the unit price and total price (which is obtained by multiplying the unit price by the quantity), the unit price will prevail and the total price corrected accordingly, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly.

2.8.2 If there is error in a total corresponding to the addition or subtraction of subtotals, the

subtotals shall prevail and the total shall be corrected: and

2.8.3 If there is discrepancy between words and figures, the amount in words shall prevail, unless the amount expresses in words is related to an arithmetic error, in which case the amount in figures shall prevail .

2.9 If there is discrepancy in an offer, the same will be conveyed to the tenderer with target date on the above lines and if the tenderer does not agree to the observation of the purchaser, the tender is liable to be ignored.

2.10 In quoting their rates, the tenderers are advised to take into account all factors including any fluctuations in market rates. No claim for enhanced rates will be entertained on this account after acceptance of the tender or during the currency of the contract.

2.11 The rates to be quoted by the tenderer shall be firm and should consist of all taxes including GST. The tax should be quoted in the GST column in Price Bid. The tax rate changes if any during the course of contract will be paid as applicable. If BHEL is required to discharge the liability of any taxes on the transaction like TDS(IT), TDS(WCT), service tax under reverse charge mechanism or any other similar taxes, which is or becomes payable by BHEL, the same shall be deducted from the bills of the contractor.

2.12 Evaluation of offers will be done based on the total landed cost to BHEL. No splitting of quantity is allowed and the entire requirement will be considered as a single package.

2.13 The rates quoted in the tender shall remain valid for a period of 'SIX MONTHS' from the date of opening of tender.

2.14 Tenderer shall not increase their quoted rates, once the tenderer has submitted his quotation and during execution of the contract in case his tender is accepted.

2.15 Before tendering, the tenderers are advised to inspect the site of work and its environments and be well acquainted with the actual working and other prevailing conditions, position of materials and labour. They should be well versed with BHEL General Conditions of Contract, Instructions to tenderers, drawing wherever applicable and specifications and all other documents which form part of the agreement to be entered into subsequent to award of work. The tenderers shall specially note that it is the tenderer's responsibility to provide any item which is not specially mentioned in the specification or drawing, but which is necessary to complete the work.

2.16 Details and quantities of each item of work shown in the "Bill of Quantities" attached here to be only approximate. They are given as a guide for the purpose of tendering only and are liable to variation and alteration at the discretion of the competent authority. The work under each item as executed shall be measured and priced at the corresponding rates to be quoted by the contractor in the Bill of Quantities attached here to.

2.17 Should a tenderer find discrepancies or omissions in the drawings wherever applicable / Specifications / Scope of work / Terms & Conditions attached to the tender documents or should be in doubt as to their meaning, he should at once address to the authority inviting the tender for clarifications. Every endeavor is made to avoid any error which can materially affect the

basis of the tender but the successful tenderer shall take upon himself to provide for the risk of any error which may be subsequently discovered and shall make no subsequent claim on account thereof.

2.18 In the event of tender being submitted by a firm, the tender must be signed separately and legibly by each partner or member of the firm or in their absence, by the person holding the power of Attorney on behalf of the firm concerned. In the latter case, a copy of the Power of Attorney duly attested by a Gazetted Officer must accompany the tender.

2.19 In case, the date of tender opening falls on Holiday, the tender will be opened on the next working day.

2.20 Every tender must be accompanied by deposit receipt for the amount mentioned as Earnest Money Deposit. This earnest money will be refunded to the unsuccessful tenderers after finalization of the award of work. In the case of successful tenderer, the earnest money will be retained as part of the Security Deposit for satisfactory completion of the work . Tenders without Earnest Money Deposit receipts are liable to be rejected. No interest will be paid on the earnest money deposits.

3. EARNEST MONEY DEPOSIT (EMD) .

- 3.1. The EMD may be submitted in following forms:
- 3.2. Cash deposit as permissible under the extant of Income Tax Act (before tender opening only)
- 3.3. Electronics fund transfer credited in BHEL account. (before tender opening only)
- 3.4. Banker's Cheque/ Pay Order/ Demand Draft In favour of BHEL (along with offer.)
- 3.5. Deposit using 'SBI Collect' to BHEL account and e-receipt can be submitted along with bid
- 3.6. Process: 1. Go to <https://www.onlinesbi.com>
- 3.7. Select SB Collect from the top menu.
- 3.8. Accept terms and conditions and proceed.
- 3.9. Select state as Karnataka.
- 3.10. Select Type as Industry.
- 3.11. Select 'BHARAT HEAVY ELECTRICAL LTD' AND SUBMIT.
- 3.12. Select payment category ' Others' and subcategory as EMD and make payment.
- 3.13. EMD of all un-successful tenderers will be refunded, without any interest, within 15 days from the date of award of contract. In case of expiry of offer validity period or any other circumstances , EMD will be released with the approval of competent authority in BHEL.
- 3.14. EMD of successful tenderer can be adjusted towards security deposit payment.
- 3.15. Unless the Contractor whose tender is accepted signs the contract agreement within fifteen days (15 days) of the date of the order directing him to do so, the amount of Earnest Money already deposited by him may be forfeited and acceptance of his tender withdrawn.
- 3.16. If, after opening of tenders, a tenderer revokes his tender or increases his earlier quoted rates or after acceptance of his tender does not commence the work in accordance with the instructions of Engineer-in-charge, the Earnest Money Deposited by him will be forfeited and

acceptance of his tender withdrawn. If only a part of the work included in the tender had been awarded to the tenderer, the amount of Earnest Money to be forfeited will be based on the value of the contract so awarded.

3.17. BHARAT HEAVY ELECTRICALS LIMITED reserves the right to reject any or all the tenders received or accept any tender or part thereof without assigning any reason thereof. In the case of acceptance of a part of tender, the time for completion may also be reduced to the extent considered appropriate by the accepting authority.

3.18. Conditional and unsigned tenders, tenders containing absurd rates and amounts, tenders which are incomplete or otherwise considered defective, tenders which are not in accordance with the tender conditions laid down by the Accepting Officer and tenders not submitted in the prescribed forms are liable to be rejected.

3.19. The tenders should be accompanied by a list of contracts already held by the Contractor at the time of submitting the tender and giving the following particulars:

- (a) Name of work, value and address.
- (b) The balance work remaining to be done on the same.

3.20. Tenders submitted by post should be sent by "Registered Post with Acknowledgement due" or by Courier. These should be posted with due consideration for any delay in postal delivery. Tenders received after the due date of opening of tenders are liable to be rejected.

3.21. The Contractor's responsibility under this contract shall commence from the date of receipt of the order or acceptance of his tender.

3.22. Fraud Prevention Policy: "The Bidder along with its associate/Collaborators/Sub-Contractors/Sub-Vendors/ Consultants/Service Providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL Website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice."

3.23. If a tenderer expires after the submission of his tender or after the acceptance of his tender, BHEL may, at their discretion, cancel such tender. If a partner of the firm expires after the submission of the Tender, after the acceptance of the Tender, BHEL may cancel such Tender at the discretion unless the firm retains its character (s).

3.24. BHARAT HEAVY ELECTRICALS LIMITED 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. They 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.

3.25. If the tenderer deliberately gives wrong information in his tender, BHEL reserves the right to reject such tender at any stage. Further the tenderer will be liable for any damage caused.

3.26. Words imparting the singular number shall be deemed to include the plural number and

vice-versa where the context so requires.

3.27. The General and Special Conditions of Contract are complementary to each other and where they are in conflict, the special condition shall prevail.

3.28. The expenses for completing the stamping the agreement shall be paid by the contractor.

3.29. Unless and otherwise stated all tendered work includes supply, testing and commissioning of equipment as agreed to in the contract.

3.30. After completion of the job, the contractor has to furnish details of actual work done in consultation with Engineer-in-charge.

3.31. Any covering letter and comments of the Contractor should be submitted in duplicate along with the offer.

3.32. The Contractor shall provide all the materials needed for testing, commissioning including consumables specified in the Scope of Work etc. In quoting their rates, the Contractors are advised to take into account the cost of the above materials.

3.33. Should a tenderer or a contractor on the list of approved contractors have a relative or in the case of firm or Company of Contractors any of its shareholder's relative is employed in any Capacity in the Electronics Division of Bharat Heavy Electricals Limited, Bangalore – 26, the authority inviting tenders shall be informed of this fact at the time of submission of the tender, failing which tender may be disqualified or if such a fact subsequently come to light, the relevant provisions of the General Conditions of Contract will apply.

3.34. These 'INSTRUCTIONS TO TENDERERS' & 'GENERAL CONDITIONS OF CONTRACT OF BHEL' shall be deemed to form an integral part of the contract agreement for the work to be entered into. In cases of variation between the two in any matter, the conditions in the 'THE INSTRUCTIONS TO TENDERERS' shall prevail. Extracts of some of the important clauses of BHEL

3.35. The Contractor shall comply with the provision of Employees Provident Fund and Miscellaneous Provisions Act 1952 and rules, regulations and other orders issued there under. He, as an employer, shall be liable to pay employer's contribution/deductions towards PF under the PF Act in respect of all labour employed by him, for the execution of the contract in accordance with the provisions of the Employees Provident Funds and Miscellaneous Provisions Act, 1952 as amended from time to time. For this purpose, he shall indicate the code number obtained from the Regional Provident Fund Commissioner or he should obtain a code number if he has not and produce the Photostat copy of the challan / receipt of monthly remittance of the contribution made by him to the PF Commissioner. Final payments due to him will be released only on production of a "No due certificate" from the Regional Provident Fund Commissioner wherever applicable. He shall also furnish such returns as are due, under the Act, to be sent to the appropriate authorities through the Principal Employer".

3.36. The Contractor should get himself registered with the E.S.I. Authorities as an independent Employer, obtain a separate code number and remit the dues in respect of the labour employed by him for the work and produce the Challans / Receipts of remittance of the

ESI contributions due under the E.S.I. Act to the Company authorities. He shall also furnish such returns, as are due, under the Act, to be sent to the appropriate authorities through the Principal Employer.

3.37. If any action is brought in by P.F. Commissioner/ESI authorities on BHEL for the work done by the Contractor for his labourers regarding PF/ESI amount due, short remittances, non remittances etc., the Contractor shall defend the case on behalf of BHEL and/or reimburse BHEL the expenses so incurred.

3.38. If applicable, the Contractor shall apply and obtain license under Contract Labour (R&A) Act 1970 and comply with the relevant provisions of this Act in respect of the labour employed by him for executing this contract. The Contractor shall furnish necessary returns to the authority through the Principal Employer.

3.39. If applicable, the Contractor shall insure all his labourers and materials. Any claim by his employees for the damages shall be settled by the contractor even action is against BHEL or to reimburse the legal expenses incurred by BHEL

3.40. Any action brought in by anybody on BHEL regarding patent, right etc., used by contractor in execution of work shall be defended by the contractor and /or reimburse to BHEL the cost of the same.

3.41. Contractor shall produce necessary records, documents, explanation whenever he is called upon to do, by any Government. Agencies like ESI, PF, VIGILANCE etc.,

4.0 MSE BIDDERS :

MSE suppliers can avail the intended benefits only if they submit along with the offer, VALID UDYAM REGISTRATION NO. FOR SERVICES .

5.0 TERMS OF PAYMENT:

5.1 The Rates are to be quoted per Basic Unit .

5.2 Payment will be made on completion of work per one Basic Unit (BU) . 1BU = 1DMC (Driver Motor Coach) + 3 TC (Trailer Coach) . 80% of the payment for one basic unit will be made on completion of all the work defined in schedule of Rates upto pre-commissioning stage duly certified by the BHEL Site Incharge , not below the Rank of Engineer . Balance 20% payment for one basic unit will be made on completion of commissioning activities duly certified by the BHEL Site Incharge , not below the Rank of Engineer . The payment will be made within 60 days from the acceptance of bills cleared in all respect . The payment to MSME vendors will be made within 45 days from the acceptance of bills cleared in all respect .

5.3 Bidder shall submit bills for the work completed under the specification, once in a month preferably within in the First week . The format for billing shall be approved by BHEL SITE ENGINEER before raising invoices. The process of certification at site and forwarding the bill to BHEL EDN Bangaloreand release of payment to Bidder is expected to take 45-60 Days after the

bills are received at BHEL Bangalore with all the statutory Documents. Bidder is advised to take note of this and ensure labor payments in time (by 10th of every month) without fail. Non-receipt of payment/delay in getting payment from BHEL cannot be the reason for Bidder to delay in making payment of wages to workers. The Bidder has to submit his running bills in printed format with serial numbers and mentioning the registration numbers for service tax, TIN, GST etc.

6.0 LD/Panalty Clause

LD/Penalty Clause : The activities per one Basic Unit (upto pre-commissioning stage) to be completed within 30 days from the date of last material supply to the contractor by BHEL . Contractors are advised to keep the record for the receipt of material from BHEL , duly signed by BHEL site representative . The material in the scope of contractor should be available for all the activities mentioned in scope of work . For any delay beyond 30 days , LD in lieu of penalty will be deducted @0.50% per week or part thereof of delay subject to maximum 10% on the basic value (per BU) . LD will be calculated for pre-commissioning activities only which is 80% cost of the total basic value for one BU. For commissioning activity (i.e. 20% cost of the total basic value for one BU) , NO LD/Penalty will be levied .
LD will be levied on Basic Cost .

7.0 EVALUATION CRITERIA :-

7.1 The evaluation will be based on landed cost to BHEL

- GeM Portal: - GeM seller Id will be mandatory to the successful / vendors before placement of order. Vendor/ vendors has to inform BHEL immediately on creation of seller Id.
- Minimum Wages:- vendor has to ensure that minimum wages as per the state guidelines / Act are to be paid to their applicable employees/ staff.
- Force Majeure Clause :- any pandemic disease which leads to lockdown/shut down of the particular ELS/Zone, the vehicle/gate pass need to be obtained from the respective competent authority, viz, police, medical etc. for entry to Electric Loco Shed (ELS) for contract man power same need to be submitted along with bills.
- No Deviation with respect to tender clauses and no additional clauses/ suggestions/ in Techno- commercial bid/ Price bid shall normally be considered by BHEL. Bidders are requested to positively comply with the same.
- BHEL reserves the right to accept or reject any or all Offers without assigning any reasons thereof. BHEL also reserves the right to cancel the Tender wholly or partly without assigning any reason thereof. Also BHEL shall not entertain any correspondence from bidders in this

matter (except for the refund of EMD).

- For any clarification on the tender document, the bidder may seek the same in writing or through email, as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay or any other delays.
- Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.
- BHEL may decide holding of pre-bid discussion [PBD] with all intending bidders as per date indicated in the NIT. The bidder shall ensure participation for the same at the appointed time, date and place as may be decided by BHEL. Bidders shall plan their visit accordingly. The outcome of pre-bid discussion (PBD) shall also form part of tender.
- The Bidder has to satisfy the Pre Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of satisfying the Pre Qualification Criteria specified in this NIT, past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD. In case BHEL decides on a 'Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorised representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders. Bidders should sign all the pages of tender documents as a token of acceptance of the tender .

8.0 SECURITY DEPOSIT

The successful tenderer shall deposit the Security deposit before start of the work. The rate of Security deposit will be 5% of contract Value.

Security deposit may be furnished in any one of the following forms

- i) Cash (as permissible under the extant Income Tax Act)
- ii) Local Cheques of scheduled Banks (subject to realization)/Pay Order/ Demand Draft /Electronic Fund Transfer in favour of BHEL
- iii) Bank Guarantee from scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.
- iv) 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)
- v) Securities available from 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)

(Note : BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or any other matter connected herewith)

vi) EMD of the successful tenderer shall be converted and adjusted against the security deposit.

vii) The Security deposit shall not carry any interest.

viii) Security Deposit can be deposited using 'SBI Collect' to BHEL account and e-receipt can be submitted.

The Security deposit will be forfeited in the event of breach of any of the terms and conditions of this contract by the Contractor.

The Security deposit will be released after satisfactory completion of the contract if NO LIABILITIES are established.

9.0 REVERSE AUCTION

"BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on www.bhel.com) . This will be decided after techno-commercial evaluation. Bidders to give their acceptance with the offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.

Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit 'Process compliance form' (to the designated service provider) as well as 'Online sealed bid' in the Reverse Auction. Non-submission of 'Process compliance form' or 'Online sealed bid' by the agreed bidder(s) will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers / contractors (as available on www.bhel.com).

Initially the Price Bids of Techno-commercially qualified bidders will be opened.

Start price for RA will be L-1 sealed envelope price bids.

Minimum two techno-commercial qualified bidders are required to conduct RA.

Whenever six or more techno-commercially qualified bidders are available , RA would be conducted amongst first 50% of the bidders arranged in the order of prices from lowest to highest . Number of bidders eligible for participating in RA would be rounded off to next higher integer value if number of techno-commercially qualified bidders is odd (e.g. if 7 bids are technically qualified , then RA will be conducted amongst lowest four bidders). However , there will be no elimination of bidders who are MSE or qualify under PPP-MII Order,2017. Bidder may go through PPP-MII Order,2017 amended time to time and produce necessary document as applicable .

10.0 GOODS AND SERVICES TAX (GST):

10.1 BHEL EDN GSTIN number is 29AAACB4146P1ZB. All invoices to contain BHEL GSTIN No.

10.2 The Bidder shall mention Bidder's GSTIN number in all quotations and invoices submitted. The Bidder shall also mention HSN (Harmonized System of Nomenclature) / SAC (Services Accounting Code) mandatorily in all quotations and invoices submitted.

10.3 Invoice submitted should be in the format as specified under GST Laws viz. all details as mentioned in Invoice rules like GSTN registration No., invoice number, quantity, rate, value, taxes with nomenclature—CGST, SGST, GST,IGST mentioned separately, HSN Code / SAC Code etc. Invoice should be submitted in original for buyer plus duplicate for credit availment.

10.4 Payment of GST to Bidder will be made only if it is matching with data uploaded by the Bidder.

10.5 Bidders to give undertaking that GST as mentioned in the Invoice has been paid either through cash or admissible input credit and also filed the returns at the time of submission of invoice.

10.6 For invoices paid on Reverse charge basis – “Tax payable on reverse charge basis” to be mentioned on the quotation / invoice.

10.7 In case GST credit is delayed/denied to BHEL due to non/delayed receipt of goods and/or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, GST amount will be recoverable from vendor along with interest levied / leviable on BHEL.

10.8 In case vendor delays declaring such invoice in his return and GST credit availed by BHEL is denied or reversed subsequently as per GST law, GST amount paid by BHEL towards such ITC reversal as per GST law will be recoverable from vendor /contractor along with interest levied/leviable on BHEL.

10.9 Goods and Services Tax as applicable shall be paid extra against GSTIN No., and certification in the bill.

10.10 The changes in GST rates due to statutory amendment of GST Act during the course of contract will be paid as applicable .

10.11 If BHEL is required to discharge the liability of any taxes on the transaction like TDS(IT), GST under reverse charge mechanism or any other similar taxes, which is or becomes payable by BHEL , the same shall be deducted from the bills of the contractor.

11. 0 RISK PURCHASE CLAUSE:

RISK PURCHASE:

- a) In the event of any successful Tenderer’s failure to fulfil any of the tender / Contract obligations as per Contract / Agreement, BHEL may entrust the job to alternate vendor and get it completed to meet the BHEL requirement and additional expenditure, if any, including consequential cost viz., demurrage etc., will be fully recovered from the Contractor who failed to complete the job in line with the Contract.
- b) The decision of BHEL with regard to the actual losses / consequential expenditure incurred by BHEL shall be final and binding on the Contractor.

The value under Risk purchase clause shall be calculates as follows:

Risk & Cost Amount= $[(A-B) + (A \times H/100)]$

Where,

A= Value of Balance scope of Work/ Supply (*) as per rates of new contract

B= Value of Balance scope of Work/ Supply (*) as per rates of old contract being paid to the contractor/ supplier at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor shall be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

*(Balance scope of work/ supply)

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work/ Supply for calculating risk & cost amount.

c) In case vendor fails to fulfil any of the tender / Contract obligations as per Contract / Agreement, contract shall be cancelled and SD shall be forfeited.

11.0 ANNEXURE-3 IMPORTANT INFORMATION

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

> Tender Notifications & List of Banned

available on BHEL web site (www.bhel.com ---

Firms)

12.0 PART –I TECHNICAL CONDITION OF CONTRACT (TCC)

1.0	Project Information
1.1	1. Purchaser / Owner : Railways- MCF Raebareli , Project Title : Supervision of Mounting & Installation of all BHEL supplied Equipment, Wiring of coaches, , CCTV Installation , Pre Commissioning Checks and Commissioning of 25kV AC 3 Phase Electrics for Non AC – ACEMU and MEMU at MCF Raebareli . The bidder is advised to visit and examine the site of WORKS and its surroundings and obtain for himself on his own responsibility all information that may be necessary for preparing the bid and entering into the CONTRACT. All costs for and associated with site visits shall be borne by the bidder.

PART –I TECHNICAL CONDITION OF CONTRACT (TCC)

2.0 SCOPE OF WORK

2.1 MEMU Rake: 8 Car Rake Configuration (motor coaches and trailer coaches)-For AC MEMU, traction converter/inverter, aux. converter & control electronics will be designed suitable for on board mounting with bogie control. The configuration of the MEMU rake applicable for this tender is as given below.

DMC	TC1	TC2	TC3	TC3	TC2	TC1	DMC
Basic Unit 1				Basic Unit 2			

2.2 SECTION – 1 / SCOPE AND QUANTITIES

a) SCOPE

The contractor has to execute the following works as per the descriptive items in the Schedules and as per notes, payment conditions, special conditions of contract, additional conditions (if any), specifications and plans attached to the tender and also in accordance with General Conditions of Contract. The Scope is as per schedules generally and further described as under: -

Installation & commissioning of equipment including complete wiring work in 3PH MEMU coaches at MCF Raebareli .(Modern Coach Factory , Indian Railways)

The scope of work mentioned above is indicative and for general guidance only. Actual scope of work may vary as per BHEL/Railway's requirement and customer feedback based on the overall project requirements in consonance with the tender. The contractor shall execute the work as directed and as detailed in latest relevant drawings and specifications.

The contractor shall visit and understand the site conditions thoroughly, study the scope and tender conditions meticulously and quote his rates accordingly.

2.3 ELIGIBILITY CRITERIA

Experience of having successfully completed similar work during last seven years ending last day of month previous to the one in which applications are invited should be either of the following :

Similar Work :

Complete wiring works including installation of at least any of the equipment viz. control/power panels, Alternators/D-engines, lights/fans, IV couplers, RMPUs/AHUs, emergency batteries, transformers,

traction motors, converters etc. pertaining to all types of coaches of ACEMU/MEMU/DEMU/DETC/SPART/LHB power cars at ICF/RCF/CLW/BLW/DMW/MCF commissioning hubs of Indian Railways .

(Copy of completion certificate along with WO/PO copy from the organization where the work is executed/being executed is to be enclosed. Submission of only WO/PO copy is not adequate)

With respect to Railways, the credentials and completion certificate should have been issued by at least a JA Grade Officer. With respect to other Government Departments and Public Sector Undertakings (PSUs), the certificate issued at the level of Engineer and above can be taken as valid. Certificates issued by private individuals for the completion of the work will not be considered.

However, if vendor have executed the work through sub-contractor of main contractor to whom Purchase order is placed by Railways, then vendor has to provide the documentary proof (like PO copy from main contractor, authorization letter from main contractor to execute the work and proof of payment etc) that they have executed the works.

2.4 PROGRAMME OF WORK:

Immediately on issue of letter of acceptance of this tender, the Contractor should submit a programme of work showing the activities sub-work wise for completing the whole work within the stipulated period of completion with monthly milestones in consultation with the Executive Engineer-in-charge of the work as per the Mile-stone statement furnished in the scope of work/enclosed to this Letter of Acceptance, or as per the agreed programme. Acceptance or otherwise of a revised programme submitted by the contractor to the BHEL is purely the discretion of the Engineer and the contractor shall have no claims whatsoever in this regard.

The contractor shall also submit the methodology they/he prefer to use for tackling the important and large items and milestone statement.

2.5 ISSUE OF COMPLETION CERTIFICATE:

As soon as in the opinion of the Engineer, the work has been completed and has satisfactorily passed any final test or tests that may be prescribed, the Engineer shall issue a certificate of completion duly indicating the date of completion in respect of the work and the period of maintenance of the work shall commence from the date of completion mentioned in such certificate. The Engineer may also issue such a certificate indicating date of completion with respect to any part of the work (before the completion of the whole of work), which has been both completed to the satisfaction of the Engineer and occupied or used by the Railway. When any such certificate is given in respect of part of a work, such part shall be considered as completed and the period of maintenance of such part shall commence from the date of completion mentioned in the completion certificate issued for that part of the work.

2.6 STUDY OF DRAWINGS AND LOCAL CONDITIONS:

The Tenderer shall follow the standard general arrangement drawings and other drawings and specifications relating to the equipment / components and fittings specified in the Tender Papers or issued at the time of execution of work. A list of standard drawings and specifications is give in Part D .

The Engineering descriptions in the approved drawings normally govern the executions. However, for effecting payment, the description of items in the schedule is final and governing the contract. If there is any variation between the description in the tender and the detailed plans, the Engineer-in-Charge will operate the correct description and his decision is final and binding on the tenderer/contractor

The Tenderer/Contractor is required to inspect the sites of works and acquaint himself with the site conditions, availability of approaches for transporting of men and materials, land, space and other factors relating to the works, availability of labour, electricity and water, etc., before quoting his rates. The extent of lead and lift involved in the execution of works and any difficulties involved in the execution of work should also be examined before formulating the rates for complete items of works described in the schedule. The Tender submitted will be deemed to have been made after such inspection. Subsequent claims on non-availability of approach, land/space etc. shall not be entertained.

2.7 SCOPE OF THE WORK AND TENDER SCHEDULES

Name of work: Handling & installation of equipment including complete wiring work in 3PH MEMU coaches at MCF Raebareli .

- Broad scope of work:
 - a) Material Handling ,Installation & commissioning, fitment, Handling, wiring and testing of all [MSU making & mounting , parking brake] the BHEL supplied equipment inside the coach, end walls, over the roof, HT compartment, under frame and bogie.
 - b) Collection of the materials pertaining to the coach from custody stores of MCF and likewise Material Movement without causing any loss or damage to any items or person is contractor's responsibility.
 - c) Checking of shell or other items received from MCF , for the mounting hole and other fixing arrangement **including modification in mounting arrangements in case of mismatch after joint decision with MCF and BHEL.**
 - d) Roof wiring, comprising of TL (train line) wiring, branch and main wiring for lights, fans, switches and speakers/display shall be completed as per the target given to

- facilitate roof ceiling work by BHEL/RCF.
- e) All clamps, brackets, stiffener rods shall be collected and welded in the appropriate places as per the arrangement drawing with necessary chipping of the welding burrs in coach and painted with two coats of red oxide primer. Minor preparatory /modification work in the coach, to facilitate equipment mounting will have to be carried out by the contractor, if necessary.
 - f) [Adequate protection to be taken while welding to avoid damage any items, cables already installed].
 - g) Quality of each welding to be checked . [scope of stiffeners , brackets , clamps , mounting hardware to be mentioned – better to take stiffeners and brackets from shell dept/mcf]
 - h) Wherever cables are laid without metallic conduits/trays (e.g. curves, near terminal boards etc.) it shall be protected using flexible conduits/cable jackets. (In contractor scope). All flexible conduits shall be secured properly using clamps or tying to stiffener rods. [All Flexible conduits, cable tie , ferrule should be of traction grade as per the RDSO requirement].
 - i) Numbering ferrules (In contractor scope) shall be used for all cables at terminal points. Heat shrinkable sleeves (In contractor scope) shall be used wherever specified in document/Drawing.
 - j) All cable terminations shall be done after proper crimping using appropriate crimping tools. Harting /Equivalent connectors and WAGO/Equivalent terminals shall be used wherever necessary as per the drawing. (All crimping tools in contractor scope.)
 - k) [All crimping tool should be calibrated, Crimping should be done as per the recommendation of OEM of crimping pin . Quality of crimping to be checked after each crimping]
 - l) Earthing lugs shall be welded to the coach body wherever earthing is specified in drawing.
 - m) Details of works to be carried out are indicated at 2.0 (Scope of Work). However this is an indicative list only. The contractor has to refer to the relevant drawings, specifications, work instructions/procedure manuals and work accordingly.
 - n) Pre-Testing of all electrical equipment in the coach as per the test protocol in association with MCF/BHEL inspection. Replacement of items (Supplied by BHEL/MCF) found defective during testing will have to be carried out by the contractor.
 - o) Coupling & decoupling of IV coupler whenever required.
 - p) [Appropriate procedure, recommended by BHEL /IV coupler Manufacturer to be followed while Coupling , Decoupling IV coupler].
 - q) Attend/ Rectification of the defects noticed by the inspecting agency at every stage till dispatch.
 - r) Area wise works to be carried out are as per scope of work at 2.0.
 - s) Any work not specifically mentioned in the scope but which is essential to complete the activity (e.g. Terminal board assembly work, coupler assembly work, etc.,) relevant to the respective drawings/work/activity shall be done by the contractor.

- t) Preparation of cable harness at MCF Raebareli .
- u) MSU mounting on Axle with required tools and consumables like Grease, Thinner, Emery Paper, Cleaning cloth , relevant gloves , lifting belts , temperature sensor etc. [All these materials are in contractor's scope]
- v) Installation of Air Conditioning Units including material handling , cabling etc.
- w) Installation of HT Room Filters including material handling
- x) Installation and connection of Transformer Oil Pump and Blower .
- y) **Cable Trays , Cable Jacket , Cable Lugs , Cable Marker / Ferrules is in contractor's scope .**
- z) **Welding Work related to " Bottom Skirt to be welded for Traction and Auxillary Converter" is in contractor's scope .**

2.8 DETAILED SCOPE OF WORK:

2.8.1 Installation & Wiring work in Driving Motor coaches (DMC):

Scope of Work for HT Compartment Loading & Wiring (Item 1 of schedule of rates)

- i.Unpacking and Loading of HT room Equipment namely Traction Converter (TRC), Aux Converter (Aux), Electronic-cabinet (E-cab), cyclonic filter, traction motor filter and Aux compressor etc. with proper loading gadgets by following specific instructions.
- ii.Tightening of HT equipment with proper hardware as per the drawing and torque marked to their recommended value.
- iii.HT equipment anchoring and connections. Anchoring of HT equipment to roof or sidewall as per drawing .
- iv.Laying and fixing of Cable Tray in HT room . Any Sharp edge or extended screw , nuts which can cause damage to cables or injury to person has to be avoided
- v.Laying of all power & control cables within HT Room equipment as per the drawing.
- vi.Mounting of the Aux. compressor and earth connection.
- vii.While laying cables in trays proper edge protection should be done with cable jackets and PMI wherever necessary in tray points, jumps, bends, also cable bunches crossing each other at 90 Degrees are to be protected separately.
- viii.HT Room flooring clearance to be given after attending non-conformities raised by inspection.
- ix.Laying of control harness within HT equipment in roof tray to desk and auxiliary circuits like aux. comp., HT fan, LVT, CT, Panto magnet valve, Panto contactor box, governor and other equipment as per drawing.
- x.Laying and bunching of aux. and control harness in the stiffener assembly of TC, Aux con and Ecab.
- xi.Mounting of HT compartment fan assembly in the HT partitions and laying of supply cables through flexible conduit and cable jackets.
- xii.Bunching of cables to their respective location, cutting, cable marker provision, crimping and connection in the case of power cables.
- xiii.Offering coach for power flash and attention of inspection bookings. Restoration cables after power flash (only those cables which should be restored).
- xiv.Offering for control flash and restoration of all aux. circuits and control circuits.

- xv. Closing of HT equipment doors before offering for commissioning.
- xvi. Provision of Networking system including CCTV cameras in all coaches, NVRs, outer vehicle front camera and rear view cameras in DMC coaches, display in the Driving cabs, GPS antenna etc., generally conforming to ICF specification No. ICF/ELEC/166(Rev.00) (one set per rake).
- xvii. LED based light fittings including passenger compartment light fittings, head lights, flasher lights & tail lamp with control unit and marker light & fans (one set per DMC)
- xviii. Lifting frames and special fixtures for equipment viz., Traction/Auxiliary converter & Transformer.
- xix. Material handling, loading & installation, fitment, cabling and wiring work with accessories, connection, securing, supervision, testing and commissioning of all the electrical equipment/fittings inside the coach, driving cab, end walls, over the roof, HT/LT compartment, under frame and bogie etc. The cabling and wiring as per clause 4.17 of RDSO spec. No. RDSO/PE/SPEC/EMU/D/0163 (Rev.1)-2012 with RDSO Addendum 1,2&3 cables shall conform to RDSO spec. ELRS/SPEC/ELC/0019 or latest. (One set per rake).
- xx. LED Lights including emergency lights and AC fans for passenger area (450 mm sweep) and BLDC fans (400 mm sweep) for drivers cab & HT and LT compartments, alarm mechanism having push button and LED indication with transparent polycarbonate enclosure & external LED indicator (PAIL-Passenger Alarm Indication Light) with release push button with SS enclosure on either side of the coach and modular type switches for fans, including mounting hardware and accessories (one set per rake)

10.1.1 TRACTION MOTOR BELLOWS FIXING, CHAIN CLEAT FIXING, ETC.,

(item 2 of schedule of rates)

- i. Movement of relevant items from warehouse/store.
- ii. Installation of bellows, dust guards and split pins
- iii. Installation of Traction motor chains cleat and connection of traction motor cables.
- iv. Body and bogie earth arrangements as per drawings

2.8.2 TRACTION MOTOR ASSEMBLY WORK IN DRIVER MOTOR COACHES

(3PH AC MEMU) (Item 3 of schedule of rates)

- Fixing of motor Suspension unit on axle to mount Traction motor.
- Lift the bogies for ease of traction motor mounting.
- Clean the traction motor, axles and nose suspension unit.
- Mount the traction motors (Four per motor coach).
- Fix the gear case assembly as per the instructions.
- Wheeling/light run test
- MSU making (details in MSU_MAKING.PDF)

2.8.3 UNDERFRAME WIRING

(item 4 of Schedule of rates)

- i>Loading of Traction transformer with proper hardware and tightening with recommended torques and torque markings.
- ii>Loading of main compressor with proper hardware and tightening with recommended torques and torque markings. Filling of lubricant oil in the main compressor before commissioning.
- iii.A.P.C equipment fixing to the bracket provided in the bogie and welding of base frame for fixing of A.P.C connector.
- iv>Loading of other under-frame equipment namely phonic wheel sensor [refer SIRS & Speed Sensor Mounting.pdf], pressure transducer ,motor speed sensor[Refer Speed Sensor.pdf] etc.
- v.Cable tray laying & fixing suitably.
- vi.Cable laying and bunching as specified in drawings.
- vii.Welding/tightening of EPDM at under-frame.
- viii.To close any unwanted holes on junction boxes after work completion.
- ix.To attend inspection non conformities before lowering clearance.
- x.Cable head termination, Earthing of equipment with earth cables.
- xi.Connecting of power and control cables to their respective terminals after H.V test.
- xii.Closing of junction box covers, EP unit terminal box covers, air spring suspension junction box cover, transformer covers etc.

2.8.4 SCOPE OF WORK FOR ABOVE ROOF EQUIPMENT LOADING

(item 5 of Schedule of rates)

- i. Mounting of roof equipment like pantograph, insulators, VCB, CT, LVT, Lighting arrestors, earthing switches, braking resistance etc.
- ii. Laying of power cables, auxiliary cables, clamping, crimping and termination and laying of busbars between various equipment.
- iii. Laying of 25kV cable head from underframe to above roof, welding of clamp and provision of hardware & tightening with recommended torque including routing of HT cable in Tray in HT room.
- iv. Earthing of equipment and application of water sealants wherever necessary. (water sealant in supplier scope).

2.8.5 SCOPE OF WORK FOR CAB & END WALL WIRING

(item 6 of Schedule of rates)

- i. Loading, fixing and securing of end wall I-V couplers, end wall panels with required hardware as per the drawing.
- ii. Fixing, wiring and connection of Head light, aux. head light, flasher light, head code & horn etc.
- iii. Loading & fixing of Driver's desk on DMC.

- iv. Loading and fixing of the E-cab panel in to the coach, placing the E-cab Panel on the base frame and anchoring/welding the panel on to the partition, pedestal and to the roof and clearing of any infringements.
- v. Loading & fixing of Partition wall equipment i.e. Sealed switch panel, AC earthing switch, DC earthing switch DC-DC converter, etc. as per drawing and fixing with earthing arrangements and wiring, termination of cables.
- vi. Laying of cables for end wall I-V couplers, end wall panels as per the drawing/Documents.
- vii. Laying of other cables (control, power and signal) using necessary insulations, bunching, crimping and connections as per Drawing/Documents.
- viii. Collect the cable harness and cab mock-up harness from cable preparatory section.
- ix. Laying of control cables, power cables and Ethernet cables with necessary insulations as per drawing and laying of mock up prewired harness between desk, E-cab panel and other equipment.
 - x. Bunching, ferruling, crimping and connection of control cables work including soldering.
 - xi. Driver's desk equipment to be loaded as per the drawing.
 - xii. Laying of earth cables, bunching and connection.
 - xiii. Ethernet cable laying, bunching and connection/crimping work as per drawing.
 - xiv. Connection of all the cables with related equipment as per drawing/Document.
 - xv. Finishing works in the end wall (cut to length of cables and cable ties).
 - xvi. Crimping and connection for desk and e-cab, Sealed switch panel etc. to be assembled.
 - xvii. Screwing of the covers on to the E-cab Panel at the time of dispatch.

2.8.6 SCOPE OF WORK FOR LOADING DRIVER'S DESK & WIRING

- i. Pasting of insulated sheets in the cable laying area. Earth cable connection for trays. (scope of the items)
- ii. Preparatory work like stiffeners welding in the front wall and cab floor area for cable routing for coupler socket and E-CAB.
- iii. Loading of front wall coupler socket plate using appropriate torque wrenches.
- iv. Loading of driver desk and mounting of base frame with proper hardware and tightening with recommended torque markings and anchoring.
- v. Earthing of desk to coach body, painting of welded portions.
- vi. Routing of coupler socket cables and roof tray flooring tray and vertical tray cables of E-Cab/Traction converter to desk TB as per drawing with proper edge protection wherever necessary.
- vii. Bunching of desk TB power, control and screen cables in their respective TBs.
- viii. Providing of cable markers, cutting, heat shrinking and crimping of cables and connections in the respective wago/equivalent studs and TBs as per drawing.
- ix. Crimping & connection of control cables.
 - x. Routing of brake controller cables from desk TB to Brake controller and its termination.
 - xi. Mounting of Master Controller with connections, Speed indicators, gauges etc. on driver Desk.
 - xii. Mounting of Sealed Switch Panels, Guard Box, lights – step light, spot light, cab lights and all instruments which are provided with driver desk.
- xiii. Proper Dressing of all the terminated wires to be done after commissioning.

2.8.7 WIPER ASSEMBLY AND PROVISION OF HOSE IN DRIVER MOTOR COACH

- i. Drilling & Tapping of holes for fixing the unit.
- ii. Fixing of wiper motor.
- iii. Fixing of wiper blade.
- iv. Fixing of water hose connection for the wiper with clamping assembly.
- v. Tightening of the wiper blade.
- vi. Earth boss welding, painting and connection work.
- vii. Wiring of wiper motor with necessary crimping & connection.
- viii. Provision of hose from tank to wiper assembly.
- ix. Welding and painting of metal clamps for the provision of hose for 2 units.
- x. Fixing of water tank in the desk area for wiper assembly.
- xi. Water filling in the water tank.

2.8.8 ROOF WIRING (PASSENGER AREA): (Item 7 of schedule of rates)

- i. Collection of Cable harness and Train line (TL) cables at the work site.
- ii. Laying of TL cables.
- iii. Provision of PVC bush at end wall.
- iv. Laying of branch harness cables.
- v. Laying main cable harness and termination in roof Junction Box (JB)/Terminal box (TB).
- vi. Laying of Speaker, Display, Acoustic Noise Measurement (ANM), Amplifier Buzzer and Side light cables etc.
- vii. Laying of fans, lights and other fittings cables as given under scope of L&F.
- viii. Laying of cables from roof tray/conduits to end wall and near Cab partition.
- ix. Equipment's Earthing.

2.8.9 LOADING OF SWITCHES/LIGHTS/FANS/SPEAKERS/DISPLAY UNITS IN DMC:

- i. LED light fitting, fan Speaker, Display, Amplifier, ANM and Side light and switches fixing etc. as per drawing.
- ii. Crimping of Fan, LED light fitting, Speaker, Display, Amplifier, ANM and Side light cables. Crimping & connection assembly for display unit.
- iii. Speaker and Display unit fixing and cable termination.
- iv. Earthing of Speaker, Display unit at equipment side.
- v. Offering for control continuity test to inspection and attending of points if any.
- vi. Fan connection and closing after control HV test.
- vii. LED light fitting connection and provision of LED light tubes after control HV test.
- viii. Offering for light & fan load test to inspection and attending of points including replacement of defective units if any.
- ix. Checking performance of fan, LED light fitting, Speaker, Display unit and Side light etc.
- x. Closing of LED lights fitting covers.
- xi. Megger, multimeters, continuity testers, phase sequence meter, and other related checking instruments (contractor's scope)

2.8.10 ROOF HARNESS LAYING IN TRAYS AND INSERTION OF CABLE JACKETS

(Item 08 of Schedule of rates)

- i. Cable harness will be issued from the store. Arrange the trays on either side of the stand 20 meters long.
- ii. Grouping the cable as per drawing from NAEW/AEW to JB's and JB's to JB's.
- iii. DC "+ve" and "-ve" cables are to be separated and separate cable jackets to be provided as per the length of cables.
- iv. Place the AC cables, DC cables and screened cables separately in the partitions provided in the tray.
- v. Bunch the cables neatly with cable tie and crimp the wire ends after inserting marking ferrules.
- vi. In case of screened cables, the outer sheath and screen to be insulated with heat shrinkable sleeve and crimped with wire end ferrule sockets.
- vii. Neatly arrange the cables and tie in tray with cable tie.
- viii. Terminate all the cables as per drawing in the JB's terminal Board.
- ix. Crimping of all types of earth cables/braided copper wire required for use in 3PH MEMU coaches (Driving motor Coach) as per the latest relevant drawings.(HARNESS CHART)
- x. Self-checking of entire work before offering for inspection.
- xi. IR test of cables after sealing of coaches by MCF.

2.8.11 INSTALLATION OF CONDUITS, CABLE BOXES AND OTHER ACCESSORIES IN DMC

(Item 09 of Schedule of rates)

- i. Installation of all rigid aluminium conduits shall be carried out as per the layout shown in the respective coach drawings.
- ii. Installation of all Junction Boxes/Cable boxes, Motor connection boxes and stiffeners shall be carried out as per the layout shown in the respective coach drawings. Providing adequate junction boxes is in the scope of contractor .
- iii. Clamps and hardware required for installation of aluminium conduits shall be provided according to the location shown in the relevant drawings and in consultation with RCF/BHEL.
- iv. The size and type of brackets and accessories to be used shall be as per the relevant RCF/BHEL drawings.
- v. Any preparatory work including cutting and dressing of sharp edges etc., shall be carried out well in advance before commencement of work.
- vi. The contractor shall execute any modifications/improvements in work as suggested by the Purchaser's engineer at no extra cost.
- vii. Conduit laying activity shall be carried out in parallel with tray laying and cable laying process which would be carried out by BHEL/RCF or BHEL/RCF nominated agency.
- viii. The entire installation activity shall be completed within mutually decided time line.

NOTE— All necessary hardware to be provided by contractor.

2.9 WIRING IN TRAILER COACHES (TC)

Installation & Wiring work in Trailer coaches(TC)

Broad scope of work :

ACT SN	ACTIVITY DESCRIPTION
1	UNDER FRAME WIRING COMPLETE INCLUDING TRANSDUCERS AND SWITCHES
2	HLS-2 NOS, FIXING AND CONNECTION
3	UNDERFRAME CONNECTIONS BEFORE LOWERING ,EP UNIT,HLS,BCT,JN BOXES NOS, INCLUDING TRANSDUCERS AND SWITCHES
4	LOWERING CLEARANCE AFTER ABOVE COMPLETION
5	PASSENGER CABIN CABLE TRAY FIXING FOR ROOF WIRING
6	PASSENGER CABIN ROOF WIRING FOR LIGHT ,FANS AND CH SOCKETS COMPLETE Lights Type S- ,TYPE B1- , CH SOC-6 NOS.
7	LIMIT SW WIRING AND CONNECTION
8	PASSENGER CABIN LIGHT ,FANS SW & CH SOCKETS COMPLETE Lights Type S- ,TYPE B1- , CH SOC-6 NOS.
9	PASSENGER CABIN PAPIIS WIRING COMPLETE
10	PASSENGER CABIN CCTV WIRING COMPLETE
11	IV COUPLER NON ALARM END FIXING INCLUDING COUPLER LEADS DRESSING AND CONNECTION
12	IV COUPLER ALARM END FIXING INCLUDING COUPLER LEADS DRESSING AND CONNECTION
13	TRAIN LINE CABLES WIRING & DRESSING COMPLETE FROM EW PANELS TO EW PANELS (110V AC 2X70SQMM), 110VDC 4X35SQ MM, 415V AC 16 SQMM 3+3, 34 CORE CONTROL CABLE, NETWORK CABLES 2X15 NOSX 2.5SQMM AND DATA CABLES 2X4X1SQMM
14	E WALL PANEL ALARM END LOADING , SECURING & DRESSING ,CONN (AFTER ROLLER SHUTTER FIXING)
15	T. PANEL NON ALARM END LOADING , SECURING, DRESSING AND CONNECTION (AFTER ROLLER SHUTTER FIXING)

16	PAPIS DISPLAYS SINGLE SIDED - , DOUBLE SIDED- NOS.
17	PAPIS- LOUD SPEAKERS AND NOS AMPLIFIER UNIT FIXING AND CONNECTION
18	CCTV CAMERA FIXING AND OTHER WORK

(item 10 of Schedule of rates)

2.9.1 ROOF WIRING:

1. Laying of TL cables.
2. Provision of PVC bush at both end walls.
3. Laying of main/branch harness cables.
4. Roof JB bunching & connection.
5. Laying of Speaker, Display and Side light cables.
6. Loading of fans, lights, switches and other fittings as given under scope of L&F loading.
7. Laying of cables from roof tray to end wall at both sides.
8. Earthing of Speaker & Display cables at coach body side.

2.9.2 LOADING OF SWITCHES/LIGHTS/FANS/SPEAKERS/DISPLAY UNITS IN TC:

1. LED light fitting, fan Speaker, Display, Amplifier, ANM and Side light and switches fixing etc. as per drawing.
2. Crimping of Fan, LED light fitting, Speaker, Display, Amplifier, ANM and Side light cables. Crimping & connection assembly for display unit.
3. Speaker and Display unit fixing and cable termination.
4. Earthing of Speaker, Display unit at equipment side.
5. Offering for control continuity test to inspection and attending of points if any.
6. Fan connection and closing after control HV test.
7. LED light fitting connection and provision of LED light tubes after control HV test.
8. Offering for light & fan load test to inspection and attending of points including replacement of defective units if any.
9. Checking performance of fan, LED light fitting, Speaker, Display unit and Side light etc
10. Closing of LED lights fitting covers.

2.9.3 ENDWALL WIRING:

1. Loading and fixing of Endwall IV couplers, plates earthing stud and end wall panels with required hardware as per the drawing.
2. Laying of cables (control, power and signal) using necessary insulations, bunching, crimping and connections as per diagram.
3. Laying of earth cables, bunching and connection.
4. Ethernet cable laying, bunching, crimping and connection work as per drawing.
5. Finishing works in the endwall (cutting of excess length of cables and cable ties).

2.9.4 UNDER FRAME WIRING:

1. Cables laying as per drawing
2. Welding/mounting of EPDM gland plates at underframe and painting of welded portions.
3. Earthing of equipment.
4. Connecting of cables to their respective terminals after H.V test.
5. Closing of junction box covers, E.P unit terminal box covers, air spring suspension junction box cover etc.

2.9.5 INSTALLATION OF CONDUITS, CABLE BOXES AND OTHER ACCESSORIES IN TC

(Item 11 of Schedule of rates)

1. Installation of all rigid aluminum conduits shall be carried out as per the layout shown in the respective coach drawings.
2. Installation of all Junction Boxes/Cable boxes, Motor connection boxes and stiffeners shall be carried out as per the layout shown in the respective coach drawings.
3. Clamps and hardware required for installation of aluminum conduits shall be provided according to the location shown in the relevant drawings and in consultation with RCF/BHEL.
4. The size and type of brackets and accessories to be used shall be as per the relevant RCF/BHEL drawings.
5. Any preparatory work including cutting and dressing of sharp edges etc., shall be carried out well in advance before commencement of work.
6. The contractor shall execute any modifications/improvements in work as suggested by the Purchaser's engineer at no extra cost.
7. Conduit laying activity shall be carried out in parallel with tray laying and cable laying process which would be carried out by BHEL/RCF or BHEL/RCF nominated agency.
8. The entire installation activity shall be completed within mutually decided time line.

3.0 HARNESS PREPARATION DETAILS WORK ACTIVITY.

1. Cutting of harness as per size specification
2. Cable harness marking as per specification
3. Ferruling of harness as per specification
4. Bunching of harness cable as per specification
5. Layout of cable in conduit and cable jacket as per specification

One side crimping termination if required

1. Rapping of power and control harness in bundle.
2. Packing of complete set of harness in one box.

4.0. BROAD DESCRIPTION OF WORK

TENDER NO:

Name of Work: -Handling & installation of equipment including complete wiring work in 3PH MEMU coaches at MCF Raebareli .

Unit of measurement: Contract work is defined for one basic unit that comprises of 1 DMC and 3 TCs. Contract shall be awarded in multiples of one basic unit. Prototype rake is comprised of 03 basic units.

Sl no	Description of Work	unit	Qty
1	Loading &Wiring work in HT area of DMC of 3PH MEMU including Installation of Equipment and termination. Movement of relevant items from Stores/feeder Shop to assembly line.	DMC	01
2	Traction motor bellow fixing, Traction motor chain cleat fixing and connection, body and bogie earth arrangement, Inter connection of couplers and socket for formation and movement of relevant items from stores /ward	DMC	01
3	Traction motors assembly in DMC of 3PH MEMU. Movement of relevant items from Stores/feeder Shop to assembly line.	DMC	01
4	Loading &Wiring work in underframe of DMC of 3 PH MEMU including Installation of equipment and termination. Movement of relevant Items from Stores/feeder Shop to assembly line	DMC	01
5	Loading &Wiring work in Above roof area of DMC of 3PH MEMU including Installation of equipment and termination. Movement of relevant items from stores/feeder Shop to assembly line	DMC	01
6	Loading &Wiring work in Cab & Endwall area of DMC of 3PH MEMU including Installation of equipment and termination. Movement of relevant items from Stores/feeder Shop to assembly line	DMC	01
7	Wiring work in Roof area of DMC of 3PH MEMU including installation of equipment and termination. Movement of relevant items from Stores/feeder Shop to assembly line	DMC	01
8	Harness Laying in trays and Inserting in cable jackets for 3Ph MEMU. Movement of relevant items from Stores/feeder Shop to assembly line	DMC	01
9	Installation of conduits cable boxes and other accessories in Underframe of DMC/TC of 3PH MEMU as per Drawings. Movement of relevant items from Stores/feeder Shop to assembly line.	DMC	01

10	Wiring work in TC of 3PH MEMU Including installation of Equipment and termination. Movement of relevant items from Stores/feeder Shop to assembly line	TC	03
11	Installation of conduits cable boxes and other accessories in Underframe of TC of 3PH MEMU as per drawings. Movement of relevant items from Stores/feeder Shop to assembly line.	TC	03
12	Harness preparation work for 1-Unit	Set	1
13	MSU Mounting on axle (4 Nos./Set)	Set	1

COMPLETION PERIOD :

The work in ONE Driver Motor Coach (DM) and THREE Trailer Coach (TC) i.e. ONE BASIC UNIT (BU) to be completed in all respect upto pre-commissioning stage within 30 days from the date of availability of work front and issue of Last Material in the scope of BHEL . Any delay will attract LD/Penalty as mentioned in LD/Penalty Clause .

Balance activity of commissioning will depend upon the MCF Commissioning Schedule .

5.0 SPECIAL NOTE FOR SCOPE OF WORK:

1. Apart from the works detailed above, provision of additional safety/passenger amenity items may have to be carried out by the contractor free of cost in case the Railways decide to introduce the same at later stage.
2. For adherence to safety and other improvements, QA/RCF or his representative is authorized to issue necessary instructions from time to time. This should be immediately effected in the coach on hand.
3. Replacement of the non-functioning/failed equipment/cables erected by the firm shall be undertaken at no extra cost, if found necessary,
4. Any minor modification work required to be carried out in the coach to facilitate the installation/wiring work will be under the contractor's scope.
5. The contractor has to refer the relevant drawings for the assemblies and sub-assemblies and quantity per coach and number of such assemblies/coach and raise demand note for the material.
6. The contractor shall maintain the account of all MCF/BHEL supplied materials. Similarly, all packing materials and generated scrap shall be collected and moved to the nominated dump area.
7. Wiring lay out, wiring to the points, fitment of equipment, hardware to be used shall be strictly based on the reference drawing given or as per the instructions of BHEL/Railway representative.

8. Checking the intactness of the wiring and safe fitment of the equipment shall be based on the check list given by BHEL/MCF. Contractor's supervisor signed check list for individual coach shall be handed over to electrical inspection.
9. No bare cable shall be visible. Where ever metal conduit or PMA conduit cannot be used, PVC/cable jacket shall be used.
10. Equipment details required for rolling stock certificate shall be handed over to inspection.
11. Defective items removed from coach shall be handed over to designated shop.
12. Supervisor-in-charge should attend the daily production meetings specified by BHEL/MCF Officials.
13. Status of work in each and every Coach allotted to the contractor should be maintained in a file/register for immediate reference.
14. Drawings to be collected well in advance and studied. Necessary work diagrams to be prepared before taking up the work.
15. Feeder shop requirements to be forecasted before intake of the coach in assembly line.
16. Defective material position in hand to be advised to the concerned supervisor of BHEL/MCF every week.
17. Design discrepancy to be advised to the concerned BHEL site in charge /Dy. CEE/Elec, MCF in writing.
18. In order to meet the daily targets, contractors need to plan their work well in advance and all materials required for the work may be drawn the previous day itself.
19. Stock position of all materials to be maintained in a register in the format given by BHEL/MCF (Bill of material per basic unit) The contractors shall return the defective items to stores through supervisor in-charge as per extant procedure on weekly basis so as to avoid short fall of materials towards the end of batch order.
20. The contractors shall strictly prohibit the use of smart phones by their staff inside the premises of the factory and shall provide them with only basic phones for communication. Only supervisors are permitted to carry smart phones.
21. Contractor staff should carry with them the safety pocket diary consisting the importance of safety in working and other aspects of safety.
22. Everyday staff position to be reported to BHEL site in charge /Dy. CEE/Elec, MCF.
23. Protection and securing of cables, jackets, PMA conduits should be carried out wherever necessary.
24. The inspection points shall be analysed for repeated points and thereby scope for continuous improvement shall be ensured.
25. If needed, re-charging of battery shall be carried out by contractor using charging facility provided by MCF with their consultation.

26. The BHEL/MCF shall have the power to direct the contractor to engage sufficient number of expert supervisors, if it is considered that the contractor's supervising arrangements is insufficient for successful completion of the work. Repeated failure to comply with the above directive also will result in the contract being terminated apart from levy of penalty.

27. Only qualified welders shall be engaged by the contractor.

6.0 INSPECTION OF WORKS IN THE COACH

1. All works connected with this tender shall be inspected by QA/MCF or his nominee with reference to the approved drawings/specifications. The contractor shall provide all assistance including labour / tools to carry out the final inspection and shall arrange to produce any test report demanded by the Inspection Engineer.

2. Any improvement to wiring, installation, material handling etc., if found necessary, shall be undertaken by the contractor and the works completed to the fullest satisfaction of the Inspection Engineer.

3. Contractor is prohibited from conducting live line testing (110V & above) of coach without associating BHEL/MCF inspection wing. Similarly, attention of defects noticed while testing shall be carried out after obtaining permission from the concerned authority.

7.0 Tentative List of Drawings for Reference List of Important Drawings

Driver Motor coach

- | | | |
|-----|---|------------------------------------|
| 1) | - | Arrangement of Roof wiring |
| 2) | - | Arrangement of U/F wiring |
| 3) | - | Layout of switch installation |
| 4) | - | Arrangement of coupler socket E/W |
| 5) | - | Arrangement of E/W wiring. |
| 6) | - | Arrangement of Driver desk & CAB |
| 7) | - | Arrangement of equipment over roof |
| 8) | - | Arrangement of HT compartment |
| 9) | - | Layout of TL Conduits |
| 10) | - | Installation of U/f equipment |
| 11) | - | Arrangement of Cable Trays. |

Trailer coach

- | | | |
|----|---|-----------------------------|
| 1) | - | Arrangement of U/f wiring |
| 2) | - | Arrangement of roof wiring. |

- 3) - Arrangement of coupler socket E/W
- 4) - Arrangement of wiring on E/W
- 5) - Layout of switch installation
- 6) Arrangement of TL conduits
- 7) - Harness chart for Roof
- 8) - Harness chart for endwall
-

Note: This is only a tentative list of drawings to give the tenderer some idea about quantum of work. The exact drawings specific to the type of coach will be issued (free of cost) only at the time of commencement work.

8.0 LIST of MATERIAL in the scope of Contractor : for project execution :

List of material to be provided by Contractor:

SL no	Item description	Tentative Qty	Spec no/ technical requirement	Remarks
1	Flexible/ pma conduits , cable ties	As per drawing provided during I & C	Railway approved vendors	1000 mtr (Approx) per basic unit.
2	cable jackets	As per drawing provided during I & C	Railway approved vendors	420 mtr (Approx) per basic unit.
3	Numbering ferrules/ marker	As per Harness chart provided during I & C	Railway approved vendors	4500 Numbers (Approx) per set cable ferrule is required.
4	Cadmium Compound (ST 710023)	40 Kgs per rake	Railway approved vendors	20 Kgs. Per basic unit
5	Heat shrinkable sleeves	As per power/earth harness scheme provided during I & C	Railway approved vendors	30 mtr (Approx) at lug termination.
6	necessary hardware (fasteners, stiffeners etc)	As per requirement	Railway approved vendors	
7	water sealants	As per requirement	Railway approved vendors	5 tubes of 200ml (Approx).
8	insulated sheets	VCB,Roof insulators,Tele marker light	Railway approved vendors	400 sq. m. (Approx).
9	Lugs , earthing braids, copper bus bars for roof equipment, earthing bus bar under frame.	As per cable harness chart provided during I & C	Railway approved vendors	Approximate lug quantities is as per list of cable lugs below table. However detailed information will be known along with cable harness chart during I & C.
10	Tools like crimping tools, cable cutter, and other cutting tools, heat guns , welding machine with consumable, drilling machine, spanners and general purpose tools.	2 Set (As per labour engaged)	Railway approved vendors	
11	Junction box U/F	15 nos,	Railway approved vendors	
12	Cable trays	As per drawing provided during I & C	Material of cable tray should be SS 304	Cable routing drawings attached for your reference.
13	Primer and paint	As per requirement	To use at few places like welding spots etc.	
14	Insulation tapes, cotton tapes	As per requirement	Railway approved vendors	

15	Small man driven trollies to handle materials at installation place	2 nos		
16	Lifting jacks for transformer mounting	RCF provided (10 ton fork lifter)		
17	Multi meters , meggers, etc	2 multimeter, 1 tong tester AC/DC, 1 maggar 1kv, 1 maggar 2.5 kv, etc	with calibration certificate	

LIST OF CABLE LUGS:

BOM (Crimping Socket) for 104 sets order of OB 3-phase IGBT MEMU project

ICF PO No.: 08/18/1848/2617/F dated 22.11.2018

(Rake Formation: DMC-TC1-TC2-TC3-TC2-TC1-DMC)

Annexure-A

Sub Sl. no.	Crimping Socket Details	Cat no/ Ref no	UM	Qty per rake	Coach wise quantity													
					DMC	TC1	TC2	TC3	TC2	TC1	DMC	TC3	TC2	TC1	DMC	TC3	TC2	TC1
1	0.5 Sq. mm	Wago 216-201	NO	586	16		55	40	55	40	55	40	55	40	55	40	55	40
2	1.0 Sq. mm	Wago 216-203	NO	810			135		135		135		135		135		135	
3	1.5 Sq. mm *	Wago 216-204/Phoenix A1 1.5-8 BK*	NO	1170	16	352	42	33	42	33	42	33	42	33	42	33	42	33
4	1.5 Sq. mm	1.5/5	NO	26			4		4		4		4		4		4	
5	1.5 Sq. mm	1.5/6	NO	12														
6	2.5 Sq. mm	Wago 216-206	NO	5152	490	160		490	152	490	152	490	152	490	152	490	152	490
7	2.5 Sq. mm	2.5/4	NO	44			22											
8	2.5 Sq. mm	2.5/5	NO	68			28		2		2		2		2		2	
9	2.5 Sq. mm	2.5/6	NO	102			9	11	3	11	3	11	3	11	3	11	3	11
10	2.5 Sq. mm	2.5/8	NO	102			11	6	11	6	11	6	11	6	11	6	11	6
11	2.5 Sq. mm	2.5/10	NO	36		4	4	10										
12	6 Sq. mm	6/6	NO	12			6											
13	10 Sq. mm	10/6	NO	16		2			2		2		2		2		2	
14	16 Sq. mm	16/6	NO	384		29	19	12		44		44		44		44		29
15	16 Sq. mm	16/8	NO	16			8											8
16	16 Sq. mm	16/10	NO	6			3											3
17	25 Sq. mm	25/10	NO	16		2			2		2		2		2		2	
18	35 Sq. mm	35/6	NO	14			7											7
19	35 Sq. mm	35/8	NO	26			1	12										1
20	35 Sq. mm	35/10	NO	92			12	34										12
21	50 Sq. mm	50/10	NO	86		4	15		8		8		8		8		4	15
22	50 Sq. mm	50/12	NO	4			2											2
23	70 Sq. mm	70/8	NO	8			1		1		1		1		1		1	
24	70 Sq. mm	70/10	NO	364	4	12	30	57	4	25		25		25		25	4	12
25	95 Sq. mm	95/10	NO	84	1		41										1	41
26	95 Sq. mm	95/12	NO	52	1		25										1	25
27	95 Sq. mm	95/10 (double hole)	NO	52			26											26
28	150 Sq. mm	150/12	NO	32			8	8									8	8
29	1.5 Sq. mm	1.5/8	NO	4		2												2
30	0.5 Sq. mm	Wago 216-208	NO	6		3												3
31	10 Sq. mm	10/10	NO	16		2			2		2		2		2		2	
32	70 Sq. mm	70/12	NO	128	4	6	6	6	6	6	6	6	6	6	6	6	4	6
33	1.0 Sq. mm	Wago 216-266	NO	674	37	30	30	30	30	30	30	30	30	30	30	30	37	30
34	2.5 Sq. mm	Fork type	NO	288	13	13	14	13	13	13	13	13	13	13	13	13	13	13

Note:

- Quantity of Lugs and crimping sockets are based on ICF Harness chart and will be applicable for prototype rakes
- *: wago 216-204 or Phoenix A1 1.5-8 shall be used
- Coachwise quantities are indicative and will be distributed across coaches as required, for total quantity supplied for rake.



* Subject to Corrections shown in Red.

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Note: The Quantity mentioned above is per rake and may vary during project execution. (50 % of total Qty. is per basic unit requirement)

9.0 TOOLS, TACKLES AND MEASURING INSTRUMENTS to be arranged by contractor :

The contractor must have adequate quantity of tools, measuring instruments, calibrating equipment etc. in his possession.. All the necessary Tools, Tackles and Measuring Instruments required during installation and commissioning works /overhauling

works / While conducting tests are to be arranged as and when required at no extra cost.

a) TOOLS, TACKLES AND MEASURING INSTRUMENTS -As per requirement for I & C at site

The Harting make pins will be supplied by BHEL . The detail list is given below .The contractor should have adequate quantity of tools . The recommended tools are available on Harting website : <https://www.harting.com>

S No.	Description
1	D-SUB CONNECTOR CRIMP FEMALE
	15P Article Number: 09 67 015 4701
2	D-Sub Crimpcontacts female
	gold plated 0,5mm ² Article
	Number: 09 67 000 8276
3	SOCKET FOR MINI-FIT JR. AWG
	18-24 AU CRIMP Article
	Number: 39000181
4	D-Sub Crimp terminal female
	9-p Article Number: 09 67 009 4701
5	D-Sub Crimp terminal male 9-p
	Article Number: 09 67 009 5601
6	D-SUB CONNECOR CRIMP MALE 15P
	Article Number: 09 67 015 5601
7	D-Sub Crimpcontacts male gold
	plated 0,5mm ² Article
	Number: 09 67 000 8176
8	Make:Harting Type:09 14 009
	3101 Details:D-Sub module +
	female crimp insert
9	Make:Harting Type:09 14 009
	3001 Details:D-Sub module +
	male crimp insert
10	D-SUB MALE MOD.CRIMP INSERT
	TWO CABLES Article Number: 09
	14 000 9932
11	D-SUB FEMALE MOD.CRIMP INSERT
	TWO CABLES Article Number:
	09 14 000 9933
12	Make:Harting Type:09 14 009
	3101 Details:D-Sub module +

	female crimp insert
13	D SUB CONTACT MALE 22-18 AWG,
	CRIMP 745229-7
14	Make:Harting Type:09 14 009
	3101 Details:D-Sub module +
	female crimp insert
15	D-SUB MALE MOD.CRIMP INSERT
	TWO CABLES Article Number: 09
	14 000 9932
16	D-SUB FEMALE MOD.CRIMP INSERT
	TWO CABLES Article Number:
	09 14 000 9933
17	DIN-Rail Mountable four
	Conductor Terminal Block
	suitable for Wire cross
18	FEMALE CONCTR FOR CRIMP
19	CRIMP CONTACTS TC3 0,5-1,5MM ²
20	SOCKET FOR MINI-FIT JR. AWG
	18-24 AU CRIMP Article
	Number: 39000181
21	09670003576 D-Sub, AWG 18-22
	crimp Male contact
22	Han DD Crimp Terminal Male 72
	Pos. Part No:09 16 072 3001
	Make: Harting
23	Han DD Crimp Terminal Female
	72 Pos. Part No:09 16 072
	3101 Make: Harting
24	Han D Crimp Terminal Male 40
	Pos. Part No:09 21 040 3001
	Make: Harting
25	Han D 40 Pos. Female Insert
	Crimp. Part No:09 21 040 3101
	Make:Harting
26	Han DD 42 Pos. M Insert
	Crimp, TYPE: 09160423001
27	Han DD 42 Pos. F Insert
	Crimp, TYPE: 09160423101
28	CNTT CRIMP MALE GOLD PLATED
	09150006123 FOR R15 CNCTR
29	CNTT CRIMP FMLE GOLD PLATED
	09150006223 FOR R15 CNCTR
30	D SUB CONTACT MALE 22-18 AWG,

	CRIMP 745229-7
31	Type D- Coded Male 4 pin M12
	connector with 4 crimp
	contacts of AWG 20- 24
32	DIN-Rail Mountable four
	Conductor Terminal Block
	suitable for Wire cross
	section of 2.5 mm2 crimped
	with Insulated lugs. Rated
	Current: 24Amp. Wago Part No.
	281-652 / Phoenix Part No.
	ST2.5-QUATRO-3031306 / Elmex
	Part No. DST2.5-2x2
33	APC receiver counter part
	connector Kit, consisting of
	following four Parts. 1.
	HAN6HPR-asg1-SV-M20 / part no
	19400061260/ Qty-1nos
	2.HAN6E Insert Female Crimp
	/part no 09330062702/Qty -
34	DIN-Rail Mountable four
	Conductor Terminal Block
	suitable for Wire cross
	section of 2.5 mm2 crimped
	with Insulated lugs. Rated
	Current: 24Amp. Wago Part No.
	281-652 / Phoenix Part No.
	ST2.5-QUATRO-3031306 / Elmex
	Part No. DST2.5-2x2
35	09670003476 D-Sub, AWG 18-22
	crimp Female contact
36	CNTT CRIMP FMLE GOLD PLATED
	09150006223 FOR R15 CNCTR
37	Make:Harting Type:09 15 000
	6403 Details:Crimp contacts
	female gold plated 0.5mm
38	Han-Quintax Modular Crimp
	Terminal Male for M12
	Connector Make: Harting, Part
	No.: 09 14 002 3001
39	Han-Quintax Modular Crimp
	Terminal Female for M12
	Connector Make: Harting, Part

a. **TOOLS, TACKLES AND MEASURING INSTRUMENTS - As per requirement for I & C at site**

The Cables will be supplied by BHEL . The detail list is given below .The contractor should have adequate quantity of tools for these sizes for cutting , stripping and crimping .

Sl.no	CABLE DETAILS (Core x size in sq.mm)	VOLTAGE GRADE
1	1 x 2.5 unscreened	600/1000
2	1 x 16 unscreened	600/1000
3	1 x 35 unscreened	600/1000
4	1 x 70 unscreened	600/1000
4	1 x 50 unscreened	600/1000
5	1 x 6 unscreened	1800/3000
6	1 x 16 unscreened	1800/3000
7	1 x 150 unscreened	1800/3000
8	1 x 35 unscreened	3600/6000
9	1 x 70 unscreened	3600/6000
10	1 x 95 unscreened	3600/6000
11	2 x 1.5 screened	600/1000
12	6 x 1.5 screened	600/1000
13	3 x 0.5 screened	600/1000
14	4 x 0.5 screened	600/1000
15	4 x 0.5	CAT5e
16	34 x 2.5 unscreened	600/1000
17	40 x 1.5 unscreened	600/1000
18	46 x 2.5 unscreened	600/1000
19	CBL, DATABUS 120 OHM MVB 2X0.5MM2 BK	
20	WTB cable (2 x 0.75 sqmm) Shielded 120 Ohm). As per clause 1.2 (23) of BHEL specification TBSG-20sets-AC EMU-SPEC/025 REV No. 00	

11.0 TENTATIVE LIST of MEASURING EQUIPMENT to be arranged by contractor (Returnable)

1	Single Phase 0-230V/ 40A AC variac	1
2	0-5KV/ 100mA HV IR tester	1
3	500V Megger digital	1
4	Multimeter fluke	2
5	Clampon Meter	2
6	Battery Charger 110V	2
7	Micro Ohm Metre	1

Notes- 1. If anything necessarily required for installation and commissioning shall be arranged by contractor.

2. The supply of Junction Boxes and Cable trays are to be supplied in adequate quantity , which is in bidders scope .

9.0 CONTRACT PERIOD – 12 MONTHS.

The contractor should ensure timely completion of work. The total work completion period for Prototype MEMU Rakes is 12 Months from the date of order or from the date of start of actual work which ever is later and contractor should consider the same while submitting the offer .

10.0 MANPOWER

The work covered under this specification is of highly sophisticated nature, requiring the best quality of workmanship and engineering for Testing & commissioning for BHEL supplied equipment. He must also have on his rolls adequately trained, qualified and experienced engineers, supervisory staff and skilled personnel. The manpower deployment identified by contractor should match requirement of sophistication involving microprocessor-based control systems and they should have

ability to learn technical knowledge from BHEL engineers to execute the work independently. The contractor and his personnel shall co-operate with the personnel of other agencies, co-ordinate his work with others and proceed in a manner that shall not delay or hinder the progress of work as a whole.

Services of minimum 12 persons per month for commissioning of MEMU rakes (16 Rakes) in 12 Months is envisaged .

12 persons is the minimum count given, but if more people are required for completing the installation and commissioning work as per schedule, more number of persons to be employed. The team should normally consist of 2 Engineers , Two Supervisors and balance technicians during pre-commissioning stage and 5 Engineers , Two Supervisors and required technicians during commissioning and field trial test. However the contractor can decide the configuration based on work load , to cater to installation and commissioning requirement .

- Supervisors should be a Diploma holders in Electrical / Electronics / Instrumentation from Government recognized Technical Board .
- Engineers should be a B.E / B.Tech in Electrical / Electronics / Instrumentation from Government recognized Universities.
- Technician should be a ITI certificate holder in Electrical/Electronics/Instrumentation/mechanical field from Government recognized Technical Board .
- All the contract staff posted at site should wear a UNIFORM preferably light blue color .

Documents related to Educational qualification of supervisor, technician and engineer shall be submitted mandatorily at the time of acknowledgement to BHEL PO before beginning of contract.

11.0 TROUBLESHOOTING DURING COMMISSIONING

In order to meet the commissioning schedules, we may have to carry out extended work timings even late in the night. During such situations, personnel along with required tools to attend to any defects should be available at ICF premises irrespective of time to support commissioning work / troubleshooting. The contractor will be required to put such personnel in shifts. The bidder must also take this aspect into consideration.

12.0 ELECTRICAL CABLING /WIRING FERULE PRINTING

All the cables shall be checked for proper dressing and for laying as per schemes.

Rake-wise printing of ferrules as per schemes shall be done by the contractor.
Materials shall be supplied by BHEL and printing shall be done by contractor.

During Execution, Electronic modules should only be touched when it is absolutely essential to do so. Before touching any electronic module, the operator should discharge the static electricity by earthing himself or better still, ensure constant discharge by wearing an earthed wrist strap. All the modules shall be handled by qualified persons only. The operator should not wear clothing made entirely from synthetic fibres, but a mixture containing at least 65% cotton.

TRAINING OF WORK FORCE – The contractor shall arrange induction safety training and awareness program for all employees before assigning work.

Reporting:

- I. The deputed persons should report and take instructions from the BHEL Site Engineer on daily basis.
- II. The Contractor shall make sure that deputed persons is necessarily available during working hours for receiving & implementing the Instructions of the BHEL site Engineer.
- III. It shall be the responsibility of the Contractor to get the attendance of the deputed staff verified by BHEL site Engineer.
- IV. The weekly/fortnightly/monthly jobs should be planned by contractor's site incharge in consultation with BHEL site engineer in such a manner that these are spread over the entire week and done during office hours.
- V. Proper registers/records of the jobs carried out on daily, weekly, fortnightly and monthly basis will be maintained by the contractor's site incharge and shall be submitted to BHEL site Engineer.
- VI. Contractor site incharge shall remain in his area most of the time and shall have information about agencies working/material stacked in his area. Suitable administrative procedure may be devised for the same.

13.0 GENERAL:

- I. Returnable materials such as tools, equipment and replacement spares etc brought inside shed shall be entered at our check post as per ICF procedures to enable you to take them back after the completion of works.
- II. All the materials such as spares/consumables etc required for services / maintenance work shall be brought with necessary delivery challans duly endorsed by security at the material gate.

14.0 TIME SCHEDULE AND MOBILIZATION:

I. INITIAL MOBILIZATION AND TENTATIVE SCHEDULE

- II. Contractor shall reach site, make his site establishment and be ready to commence the work **within two weeks** from the date of fax letter of intent (LOI) or as per directions of construction manager of BHEL.
- III. In case of advancement of BHEL's various milestones, contractor shall plan his activities and mobilize additional resources accordingly to the satisfaction of BHEL engineer within the quoted rates

15. IV . PART –I GENERAL CONDITION OF CONTRACT

CONTRACTOR'S OBLIGATIONS

Contractor shall deploy the required nos. of workmen for execution of the work awarded to him and he or his authorized representative will be solely entitled to instruct such workers about the manner in which the awarded work is to be carried out as per the prescribed specifications and as directed by Engineer-in-charge. The contractor shall be fully responsible for the work awarded to him and fulfil following obligations.

- Contractor shall depute his workmen as per the details given in scope of work. The work shall be executed as per work instructions and to the satisfaction of Engineer-in-charge.
- Contractor shall ensure that the employees deployed in the premises of MCF are physically and mentally fit and do not have any criminal records. Such employees should possess requisite skill, proficiency, experience etc. to carry out the work.
- Contractor shall maintain appropriate records of his employees deployed to carry out the work.
- Contractor shall provide employment card/identity card with photograph duly verified and attested by the contractor to his employees deployed to execute the work. Contractor shall also indicate the name of the proprietary/partnership firm/company, place of work, contact number and duration of validity of the card etc. in such identity card.

- Contractor will be fully responsible for the good conduct of his employees deployed to execute the work. In case of any misconduct/misbehavior by any employee, the contractor will replace such employee(s) immediately.
- Contractor will ensure that the work is executed through his employees on his rolls only and under no circumstances the contractor will deploy any casual employees to carry out the work; nor shall sub-contract the work without prior written permission from BHEL.
- Contractor will keep watch on his employees and he will be liable for any pilferage /loss to BHEL due to Acts of omission and commission by his employees. Similarly, for any compensation to outsiders and his employees on account of any act of omission and commission by the employees deployed by the contractor shall lie exclusively with contractor.
- The contractor shall be responsible for enforcing all safety regulations as applicable inside the factory at MCF, while undertaking the work tendered. The contractor shall be responsible for issue and wearing of the safety equipment's/gadgets.
- In the event of termination of contract for any reason whatsoever, the contractor shall withdraw all his employees and his equipment deployed for this work, if any from the establishment of MCF.
- Contractor shall take necessary insurance policy for his workmen to cover workmen's compensation and accidental cover as may be applicable. Provided if the contractor has or proposes to obtain ESI registration prior to the commencement of the contract, this insurance policy will not be insisted upon.
- BHEL will provide materials for repairs and maintenance wherever applicable and agreeable. However, it will be the responsibility of the contractor to inform concerned Engineer-in-charge to ensure the materials/equipment for assigned jobs.
- The age of the contract workers deployed at BHEL EDN should be between 18 to 60 years.

16.0 CONTRACTOR'S STATUTORY LIABILITY

- The Contractor shall comply with the provisions of all the applicable Central or State laws/Rules in general and in particular to the Code on Wages 2019, Factories Act 1948, Child Labour (Prohibition & Regulation) Act 1986, Employer's Liability Act 1938, Employees Provident Fund & Miscellaneous Provisions Act 1952, Employees State Insurance Act 1948, Industrial Disputes Act 1947, Employee's Compensation Act 1923, Payment of Gratuity Act 1972, the Contract Labour [Regulation & Abolition] Act 1970, Income Tax Act 1961, Maternity Benefit Act 1961, Arbitration and Conciliation Act 1996, Goods & Services Tax Act 2017, Prevention of sexual harassment at workplace Act 2013, Guidelines/notification related to Safai Karmachari Act (as applicable) and other relevant laws/Rules applicable. The contractor shall also comply with

applicable Acts/Rules, provisions, regulations, notifications and amendments made thereunder by concerned authorities from time to time.

- Contractor shall comply with all statutory requirements, Rules, Regulations and Notifications issued from time to time by the concerned authorities in relation to employment of his employees.
- Contractor shall ensure payment of statutory minimum wages prescribed by the Uttar Pradesh State government notified minimum wage, to his workers deployed in the work from time to time and maintain proper records of their timely disbursement in the prescribed manner. The periodic revision of this wages shall be noted by the contractor from time to time and the payment to his workers shall at no point of time be less than these minimum wages.
- Any periodic change in Minimum wages and statutory compliance as notified by appropriate Govt. agencies or thereof during the contract period shall be borne by the contractor.
- Contractor shall provide PF pass book to his employees and ensure payment of PF, EDLI, pension dues under EPF & MP Act 1952 to the RPFC.
- Contractor shall ensure payment of ESI contribution under ESI Act 1948 and provide ESI membership No. card of each employee.
- If monthly wages of any person (excluding remuneration for overtime work) exceed wages prescribed in sub clause (b) of clause (9) of Section 2 of the ESI Act for eligibility (presently INR 21,000/-) at any time before the beginning of the contribution period, he will not be covered under ESIC and the contractor shall mandatorily obtain Workmen Compensation policy in line with the Workmen Compensation Act, 1923 for contract labour deployed by him who are not covered under ESI Act. A documentary proof for the same shall be submitted to BHEL within 15 days from commencement of work. The contractor shall also enclose a valid documentary proof for having Workmen Compensation policy for contract labour deployed by him who are not covered under ESI Act, along with his monthly bill.
- Contractor shall maintain proper records of PF, EDLI, Pension, ESI contribution, administrative charges etc. wherever applicable and shall produce proof of deductions as well as remittances. Contractor shall issue wage slips to his employees.

- Contractor shall furnish proper Returns to the concerned statutory authorities and provide a copy of the same to BHEL. These returns shall be subject to verification whenever the statutory authorities/ inspectors visit RCF for inspection of records of the contractors.
- Contractor shall be solely responsible for non-payment/delayed payment of wages/DA, contributions under EPF & MP Act, ESI Act etc.
- In case, the contractor fails to make payment of wages to his employees or remittance of contribution to the concerned authorities & a claim is made against BHEL for whatsoever reason, the security deposit/other dues/running bills under the contract can be utilized by BHEL to discharge the liability of the contractor.
- Contractor shall indemnify BHEL against all claims and losses if it suffers under various labour laws, statutes or any civil or criminal law in connection with employees deployed by him.
- The liability for any compensation on account of injury sustained by an Employee of the contractor will be exclusively that of the contractor, as BHEL is not the employer for him.
- Contractor shall obtain necessary insurance cover at his own cost to mitigate any risk of accidents, losses, damages etc. BHEL shall not be responsible for any losses, damages to the contractor or to his employees.
- The Engineer-in-charge shall, on a report having been made by the inspecting Officer as defined in the Contractor's Labour Regulations, have the power to deduct from the moneys due to the contractor, any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of workers, non-payment of wages or of deductions made from his or their wages which are not justified by the terms of the contract or for non-observance of the said Contract Labour Regulations.
- Contractor should ensure that the employees allowed entering BHEL premises shall be covered under independent code numbers / exemptions under EPF &

MP Act 1952 and ESI Act 1948 and shall cover his employees under the said codes. The contractor shall also indicate ESI No. and PF No. in the techno-commercial bid.

- Payment of bonus under the Payment of Bonus Act, payment of gratuity under the Gratuity Act, and retrenchment compensation under ID Act will be the sole responsibility of the contractor.
- Over and above the daily wages rate, the contractor shall make payment to his employees deployed under this contract towards leave with wages also.
- Contractor shall observe provisions of Factories Act /any other Statutory Bodies in respect of working hours, holidays, rest intervals, leaves and overtime to his employees who may be deployed in MCF premises & maintenance of necessary registers, forms and statutory formats which shall be always available for inspection by BHEL/ Factories Inspector /any other Statutory Bodies factory in separate. No work shall be done on overtime, Sundays or on other declared holidays without written permission from MCF.
- Contractor shall be responsible for making payment of wages before expiry of 7 (seven) days from the last day of wage period and to ensure disbursement through Bank account of contract labours and subsequently obtain their signatures in the wage payment register.
- Contractor shall obtain license under CL (R&A) Act, 1970 or amendments thereof.

17.0 GENERAL TERMS & CONDITIONS

- Engineer-in-charge shall give overall instructions to the contractor or his authorised representative for the jobs to be carried out. BHEL will have nothing to do or be concerned with the employment of employees working for the contractor. The relationship between BHEL and the contractor will be that of independent entities and nothing herein contained will amount to joint venture, partnership or on employer-employee relationship. Supervision of work shall be done by the contractor/his authorized Supervisor exclusive for this work only.
- The contractor shall maintain regular contact with the designated Engineer-in-charge of BHEL and will interact on matters relating to the work awarded under this contract.

- In case the contractor does not carry out the contractual / statutory obligations or the services rendered by him are found to be unsatisfactory, BHEL shall bring the same to his notice and he will be obliged to discharge the obligations and rectify the deficiency / anomaly within the specified time in the notice and in continuation of such deficiencies/ failure to compliances limited to a maximum of 03 such notices from BHEL, failing which BHEL reserves the right to terminate the contract without assigning any reason what so ever. In such an event, no damages will be payable for short closure of the contract and the contractor shall be liable to pay BHEL for any loss or hardships it may suffer, such termination shall be for the contractor's default and any money including deposits or bills available with BHEL will be forfeited and any further claim on the contractor may be made by BHEL for recovery of any loss.
- The decision of BHEL regarding interpretation of any terms and conditions set forth in this agreement shall be final and binding on the contractor.
- Notwithstanding anything contained in this tender document, the contract may be terminated by BHEL without assigning any reason thereof by giving a notice of 30 days to the contractor.
- The contractor shall commence the work immediately on receipt of the order and the contract shall remain valid for the contract period from the date of commencement of work, after issue of Work order/LOI. The parties reserve the right to extend the contract on mutually agreed terms and conditions.

18.0 SPECIAL INSTRUCTIONS

- The management of BHEL shall have the right to withhold payment of or make recoveries from claims due to the contractor in respect of any loss or damage caused or occasioned in respect of the properties of BHEL under the terms and conditions of this arrangement or any payment necessitated due to the infringement of any statutory obligations by the contractor.
- The contractor shall not transfer or submit the work to any one without the prior written approval of BHEL. The contractor shall either by himself or through a competent agent approved by BHEL authorities, perform the said work.
- The contractor or his authorized agent approved by BHEL shall be in attendance in BHEL premises during all working hours for supervising the work. For any negligence of the service employed by the contractor or for any loss or damage caused or occasioned by himself, his agents or workmen in respect of the property of BHEL, the contractor shall be personally responsible and shall make good the loss forthwith.
- Whenever under the contract any sum of money shall be recovered from or payable by the contractor, the same shall be paid by the contractor on demand

or such amount may also be deducted from any sum due or from any sum which at any time thereafter becomes due to the contractor under his contract or under any other contract or from his security deposit, in respect of this work or in respect of any other work.

If the management of BHEL engages workers to complete any part or whole of the work as per this contract for any period due to failure of the contract he has to reimburse to the management of BHEL, the extra cost involved on this account.

- All items of work done shall be entered in a register daily so that complete record is obtained of all work performed under this arrangement, and signed and dated by both parties viz., persons authorized for and on behalf of BHEL and the contractor or his agent approved by the company each day on completion of work.
- If any controversy regarding performance of any item of work is there it has to be settled before signing on the register by parties on the same day. No objection will be entertained after the contractor/his supervisor has signed in the register.
- Without prejudice to any rights or remedies under this agreement if the contractor dies, the BHEL authorities shall have the right to terminate this agreement without any liability whatsoever as regards to enlistment of the work for the balance contract period after the death of the contractor.
- The contractor shall disburse the wages through Bank Account of Contract labours and obtain their signature in the payment register on or before 7th of every month, if it falls on Sunday/Holiday, payment shall be made on previous day.
- The rates of wages should be quoted inclusive of ESI & PF. Exact amount of wages remitted to ESI & PF authorities in respect of workmen engaged for the above and the details of amounts remitted towards their PF & ESI for each month to be enclosed.
- The contractor shall apply & obtain license under the Contract Labour (R&A) Act 1970 and comply with the relevant provision of this Act, in respect of the labour employed by him for executing this contract. The contractor shall furnish necessary returns to the authority through the principal Employer.
- The contractor shall comply with the provisions of the Code on Wages Act 2019, Workmen's Compensation Act 1923 and other statutory law relating thereto and made thereunder from time to time.
- The contractor shall comply with the provisions of the workmen's compensation Act 1923 Employment of Children Act 1938, Employer's Liability Act, 1938, Industrial Disputes Act 1947 & other Acts Central or States that may be applicable to him. He shall be liable to pay all such sum or sums that may become payable as contribution, compensation, penalty, fine or otherwise, which the provision of the said acts, to or on behalf of any workmen employed

by the contractor by an authority empowered under the relevant Act. Any cost incurred by the Management of BHEL in connection with any claim or proceedings under the said Acts or in respect of loss, injury or improper performance of this contract by the contractor, his workmen, servant and any money which may become payable to the management of BHEL as aforesaid shall be deemed to be deducted by the management of BHEL from any money due or accruing to the contractor by the management of BHEL or may be recovered by the management of BHEL from the contractor in the other manner.

- The contractor should take independent code numbers under EPF Act 1952 and ESI Act 1948 and shall cover his workmen under the Employees Provident fund schemes and Employees State Insurance Act 1948 and show proof of payment of subscriptions / contributions to the concerned authorities. Both in respect of ESI/EPF the contractor shall obtain necessary declaration forms from his employees and obtain individual insurance and PF number and shall furnish to the company necessary proofs for having made remittance of ESI & PF contributions in respect of all contract labourers engaged by him.
- Regards Employees State Insurance Act, the contractor shall submit Photostat copies of the challans of remittance of the contributions (both the employees' contributions and his own contribution thereon) to the ESI Corporation in respect of the employees engaged in RCF by him for this work for the relevant period before any payment is released by BHEL..
- As regards the Employees Provident Fund and Miscellaneous Provision Act 1952 and rules and regulations and schemes framed thereunder, he shall be liable to pay employees compensation under the Act in respect of all labour employed by him for the execution of the contract. For this purpose, he shall indicate the code number obtained by him from the Regional Provident Fund Commissioner through H.R. department, EDN BHEL and produce the Photostat copy of the challan receipt of monthly remittance of the contractor will be released only on production of 'NO DUE CERTIFICATE' from the Regional Provident Fund Commissioner. He shall also furnish such returns as are due under the Act to be sent to the appropriate authorities through BHEL as Principal Employer.
- The BHEL General Conditions of Contract shall also apply to this work except to the extent modified in these conditions. The contractor shall scrutinize the GCC available in BHEL EDN and acquaint himself with provisions thereof to the satisfaction.
- The management of BHEL shall be at liberty to terminate the contract by issuing a month's notice to the contractor without assigning any reason what so ever. As regards unsatisfactory performance or non-compliance with any of the terms & conditions of the contract by the contractor, the management of the BHEL shall have the right to terminate the contract forthwith without notice &

rearrange the balance work through other agencies at the risk & cost of the contractor & under such circumstances, the security deposit paid by the contractor shall stand forfeited.

- The contractor shall follow such Act, rules & regulations of the State/Central Govt that are in force & that may be framed from time to time. BHEL shall not be responsible for any infringement of the various statues in force by the contractor.
- The contractor shall take, at his own cost the necessary license in respect of this work. The expenses in completing the formalities in executing the agreement including execution on stamp paper will also be met by the contractor.
- **Statutory Deduction such as TDS towards Income Tax and GST TDS** will be made as per Rules from the bills payable to contractor.
- **Signature of the Parties**
 - Work order issued by BHEL to be signed and returned to BHEL. It should be signed with seal of the firm / company.
- The Job contractor shall maintain following Registers under Contract Labour (Regulation and Abolition) (Central) Rules, 1970 / other Acts applicable.
 - Muster Roll – Form No. (XVI)
 - Register of Workmen Employed by Contractor – Form No. (XIII)
 - Wage Register – Form No. (XVII)
 - Register of Over Time – Form No. (XXIII)
 - Register of Fines – Form No. (XXI)
 - Register of Advance – Form No. (XXII)
 - Register of Wages cum Muster Roll – Form No. (XVIII)
 - Wage Slips – Form No. (XIX)
 - Employment Cards – Form No. (XIV)
 - Register of Deduction for Damage of Loss – Form No. (XX)
 - Service Certificate – Form No. (XV)
 - Registers under Equal Remuneration Act
 - Leave with wages – Form No. 14 under Karnataka Factories Rules 1969
 - Bonus Register – Form C under payment of Bonus Rules 1975
 - Accident Register
 - ESI/PF challans, records, Registers and returns under ESI/PF Acts.
 - Any other records / registers required to be maintained by the contractors under statutory provisions applicable to him

- The contractor should reach site and establish his site office and mobilize to commence the work as per directions of BHEL engineer. The date of starting the work at site shall be fixed in consultation with BHEL's engineer and the same will be recorded in measurement book while entering the first RA bill.

19.0 DEFINITION OF WORK COMPLETION

The contractor's scope of work under these specifications will be deemed to have been completed in all respect, only when all the activities are completed satisfactorily and so certified by BHEL site in charge. The decision of BHEL in this regard shall be final and binding on the contractor

20.0 ANNEXURE-C

20.1 SAFETY CODE

RESPONSIBILITIES OF THE CONTRACTOR IN RESPECT OF SAFETY OF MEN, EQUIPMENT, MATERIAL AND ENVIRONMENT

1. Before commencing the work, contractor submit a "SAFETY PLAN" to the authorized BHEL Official. The 'Safety Plan' shall indicate in detail the measure that would be taken by the contractor to ensure safety of men, equipment, material and environment during execution of the work. The plan shall take care to satisfy all requirements specified hereunder. The contractor shall submit safety plan along with his offer. During negotiations before placing of work order and during execution of the contractor BHEL shall have right to review and suggest modification in the Safety Plan. Contractor shall abide by BHEL decision in this respect.

2. The contractor shall take all necessary safety precautions and arrange for appropriate appliances as per direction of BHEL or its authorized officials to prevent loss of human lives, injuries to personnel engaged, and damage to property and environment.

3. The contractor shall provide to its work force and ensure the use of the following personal protective equipment as found necessary and as directed by the authorized BHEL officials:-

- (i) Safety Helmets conforming to IS – 2925: 1984. (ii) Safety Belts conforming to IS – 3521: 1983.
- (iii) Safety Shoes conforming to IS – 1989: 1978.

(iv) Eye and Face Protection devices conforming to IS – 8520: 1977 and IS – 8940: 1978.
(v) Hand and body protection devices conforming to: IS – 2573: 1975, IS – 6994: 1973, IS – 8807:1978, IS – 8519: 1977.

All tools, tackles, lifting appliances, material handling equipment scaffolds, cradles, safety nets, ladders, equipment etc. used by the contractor shall be of safe design and construction. These shall be tested and certificate of fitness obtained before putting them to use and from time to time as instructed by authorized BHEL official who shall have the right to ban the use of any item.

All electrical equipment, connections and wiring for constructions power, its Distribution and use shall conform to the requirement of India Electricity Act and Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the contractor to carry out all types of electrical works. All electrical appliances including portable electric tools used by the contractor shall have safe plugging system to source of power and be appropriately earthed.

The Contractor shall not use any hand – lamp energized by electric power with supply voltage of more than 24 Volts. For work in confined spaces, lighting shall be arranged with power source of not more than 24 Volts.

The contractor shall adopt all fire safety measures as laid down in the “Code for Fire Safety at Construction sites” issued by the Safety Department of the Construction management (HQ) of BHEL and as per directions of the authorized BHEL official. A copy of the above referred “Code of Fire Safety at Construction Sites” shall be made available by BHEL to the contractor for reference, on demand by the contractor, during tendering stage itself.

Where it becomes necessary to provide and/or store petroleum Products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the contractor shall be responsible for carrying out such provisions and/or storage in accordance with the rules and regulations laid down in the relevant government acts, such as Petroleum Act, Petroleum and Carbides of Calcium manual of the chief controller of Explosives, Govt. of India.etc., prior approval of the authorized BHEL official at the site shall also be taken by the contractor in all such matters.

The contractor shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working when natural daylight may not be adequate for clear visibility.

The contractor shall be held responsible for any violation of statutory regulations local, state or central and BHEL instructions, that may enrage safety of men, equipment, material and environment in his scope of work or another contractor’s or agency’s cost of damages if any, to life and property arising out of such violation of statutory regulations and BHEL instructions shall be borne by the contractor.

In case of a fatal or disabling injury accident to any person at construction sites due

to lapses by the contractor, the victim and/or his/her dependents shall be compensated by the contractor as per statutory requirements. However, if considered necessary, BHEL have the right to impose appropriate financial penalty on the contractor and recover the same from payments due to the contractor for suitably compensating the victim and/or his/her dependents. Before imposing any such penalty, appropriate enquiry shall be held by BHEL giving opportunity to the contractor to present his case.

In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover cost of such damages from payments due to the contractor after holding an appropriate enquiry.

In case of any delay in the completion of a job due to mishaps attributable to lapses by the contractor, BHEL shall have right to recover cost of such delay from payments due to the contractor, after notifying the contractor suitably and giving him opportunity to present his case.

If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given a reasonable opportunity to do so; provide necessary safety devices and equipment or to carry out instructions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorized BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the contractor after giving a notice of not less than seven days indicating the steps that would be taken by BHEL.

The contractor shall submit report of all accidents, fires and property damage, dangerous occurrence to the authorized BHEL official immediately after such occurrence, but in any case not later than twelve hours of the occurrence. Such reports shall be furnished in the manner prescribed by the contractor to the authorized BHEL official from time to time as prescribed.

Before commencing the work, the contractor shall appoint/nominate a responsible officer to supervise implementation of all safety measures and liaison with his counterpart of BHEL.

If Safety record of the contractor in execution of the awarded job is to the satisfaction of Safety Department of BHEL, issue of an appropriate certificate to recognize the safety performance of the contractor may be considered by BHEL after completion of the job.

21.0 ANNEXURE– E

21.1 ARBITRATION:

The parties shall attempt to settle any disputes 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, or in connection with this contract through friendly discussions. In case no amicable settlement can be reached between the parties through such discussions, in respect of any dispute; then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration of an arbitrator appointed by Head of the BHEL –EDN. Such Sole Arbitrator appointed, shall conduct the arbitration in English language.

It is term of the contract that the party invoking arbitration shall specify the dispute or disputes to be referred to arbitration under clause together with the amount or amounts claimed in respect of each such dispute.

The Arbitrator shall pass a reasoned award and the award of the Arbitration shall be final and binding upon the Parties.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Bangalore.

The cost of arbitration shall be borne by the parties as decided by the Arbitrator upon him entering the reference.

Subject to the Arbitration Clause as above, the Courts at Bangalore alone shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract.

Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the parties shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and efficiency in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.

21.2 HEALTH, SAFETY & ENVIRONMENTAL POLICY

The Management is committed to be an environmentally sound company in its activities, products, services and to provide safe and healthy working environment covering its employees, products & services as an integral part of business performance through:

- Compliance with applicable Legislation and Regulation
- Setting objectives and targets to eliminate/control/minimise environmental

pollution, risks due to Occupational Health and Safety Hazards.

- Promotion of activities for conservation of resources by environmental management with focus on oil, electrical energy and chemicals.
- Enhancement of Environmental, Safety and Occupational Health awareness among employees, customers, suppliers, contractors by proactive communication.
- Regular evaluation and pro-active measures for prevention & control of environmental pollution/accidents/occupational diseases.
- Appropriate training of employees and interested parties on Health, Safety & Environmental (HSE) aspects.
- Formulation and maintenance of HSE Management Programs for continual improvement.
- Periodic review & audit of HSE Management System to ensure its continuing suitability, adequacy and effectiveness
- Communication of HSE Policy to all employees and interested parties.

Co-operation with concerned agencies/regulatory bodies engaged in HSE activities.

PART I : FORMS & PROCEDURES

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1.3	Declaration by Authorised Signatory	F-3 (Rev 00)	To be submitted by bidder on Letter Head
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Form No.:F-01(Rev 00)

1.1 OFFER FORWARDING LETTER / TENDER SUBMISSION LETTER
(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

Offer Reference No:.....

Date:.....

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : Submission of Offer against Tender Specification No:

I/We hereby offer to carry out the work detailed in the Tender Specification issued by Bharat Heavy Electricals Limited, Electronic Division, Bangalore, 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.Amendments/Clarifications/Corrigenda/Errata/ etc issued in respect of the Tender documents by BHEL
- 2.Notice Inviting Tender (NIT)
- 3.Technical Conditions of Contract
- 4.General Conditions of Contract
- 5.Forms and Procedures
- 6.Price Bid

Should our Offer be accepted by BHEL for Award, I/we further agree to furnish „Security Deposit“ for the work as provided for in the Tender Conditions within the stipulated time as may be indicated by BHEL.

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

I/We have deposited/depositing herewith the requisite Earnest Money Deposit (EMD) as per details furnished in the Check List.

Date:

Name:

Place:

Address

1.2 DECLARATION OF ACCEPTANCE TO TERMS & CONDITIONS

1. I / we have understood clearly the areas, scope and nature of works and terms and conditions and shall scrupulously abide by the same.
2. As a registered contractor, I / we have understood clearly of our sole responsibility to faithfully comply with all the, requirements, Labour Laws including the Factories Act/, Code on Wages Act 2019/, Contract Labour (Regulation & Abolition) Act/, Workmen Compensation Act/, ESI Act/, PF Act/, Sales tax and Taxation Acts and others as applicable from time to time and M/s. BHEL-EDN or its officers shall not in any way beheld responsible for any failure or violation on our part.
3. I / we have understood clearly of our sole responsibility to disburse the wages duepayable to the personnel engaged by me/us under the contract promptly in due time and rated irrespective of whether M/s. BHEL-EDN has settled our bills or not. It is also clearly understood by us that we should ensure that the wages paid are in no case less than the minimum wages prescribed and in force at the relevant period.
4. I / we agree to maintain all types of registers applicable under the prevailing labour laws and produce them for verification as and when called by the officers of BHEL- EDN/Inspecting authorities.

SIGNATURE OF THE CONTRACTOR

Date:

Name:

Place:

Address:

Form No.:F-03(Rev 00)

1.3 DECLARATION BY AUTHORISED SIGNATORY OF BIDDER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : Declaration by Authorised Signatory

Ref : 1) NIT/Tender Specification No ,

2) All other pertinent issues till date

I/We, hereby certify that all the information and data furnished by me with regard to the above Tender Specification are true and complete to the best of my knowledge. I have gone through the specifications, conditions, stipulations and all other pertinent issues till date, and agree to comply with the requirements and Intent of the specification.

I further certify that I am authorised to represent on behalf of my Company/Firm for the above mentioned tender and a valid Power of Attorney to this effect is also enclosed.

Yours faithfully,

(Signature, Date & Seal of
Authorized Signatory of the Bidder)

Date:

Enclosed : Power of Attorney

Form No.:F-04(Rev 00)

1.4 NO DEVIATION CERTIFICATE

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : **No Deviation Certificate**

Ref : 1) NIT/Tender Specification No.....,

2) All other pertinent issues till date

We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred NIT/Tender Specification.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions, Integrity Pact (if applicable) and acceptance to Reverse Auctioning process.

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

Thanking you,

Yours faithfully,

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

Form No.:F-05(Rev 00)

1.5 DECLARATION CONFIRMING KNOWLEDGE ABOUT SITE CONDITIONS
(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : **Declaration confirming knowledge about Site conditions**

Ref : 1) NIT/Tender Specification No,

2) All other pertinent issues till date

I/We, hereby declare and confirm
that we have visited the Project Site as referred in BHEL Tender Specifications and acquired full knowledge and information about the Site conditions including Location of various work places, site specific requirements and rules and regulations, available facilities, Wage structure, Industrial Climate, the Law & Order and other conditions prevalent at and around the Site. We further confirm that the above information is true and correct and we shall not raise any claim of any nature due to lack of knowledge of Site conditions.

I/We, hereby offer to carry out work as detailed in above mentioned Tender Specification, in accordance with Terms & Conditions thereof.

Yours faithfully,

(Signature, Date & Seal of Authorized Representative of the Bidder)

Form No.:F-06(Rev 00)

1.6 EXPERIENCE CERTIFICATE

PROFORMA FOR FURNISHING EXPERIENCE CERTIFICATE
(Last 2 years preceding the date of opening of tender.)

Name and address of

Department :

Agreement No &

Date :

Name and address of Unit :

Value of Agreement : Name and address of Contractor : Original

Currency :

Name and Type of work :

Actual date of completion :

Nature of work executed :

No. of extensions granted :

Sl. No.	Nature of Work	Value as per Agreement	Revised value	Payment received as per actual Execution	Remarks

Details of Installations : General remarks about performance.

Signature and Seal of the Authority

Form No.:F-07(Rev 00)

1.7 DECLARATION FOR RELATION IN BHEL

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder failing which the offer of Bidder is liable to be summarily rejected)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : **Declaration for relation in BHEL**

Ref : 1) NIT/Tender Specification No.....,

I/We hereby submit the following information pertaining to relation/relatives of proprietor/Partner(s)/Director(s) employed in BHEL

Tick(v) any one as applicable:

1. The Proprietor, Partner(s), Director(s) of our Company/Firm DO NOT have any relation or relatives employed in BHEL

(OR)

2. The proprietor, Partner(s), or Director(s) of our Company /Firm has relation / relatives employed in BHEL and their particulars are as below:

(i)

(ii)

Signature of the Authorised Signatory

Note:

1. Attach separate sheet, if necessary.

2. If BHEL Management comes to know at a late that the information furnished by the Bidder is false, BHEL reserves the right to take suitable action against the Bidder/Contractor.

1.8 NON DISCLOSURE CERTIFICATE

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

NON DISCLOSURE CERTIFICATE

I/We understand that BHEL-Electronics Division, Bangalore is committed to Information Security Management System as per their Information Security Policy.

Hence, I/We M/s.....
who are submitting offer for providing services to BHEL- Electronics Division, Bangalore against Tender Specification No: _____, hereby undertake to comply with the following in line with Information Security Policy of BHEL Electronics Division, Bangalore

To maintain confidentiality of documents & information which shall be used during the execution of the Contract.

The documents & information shall not be revealed to or shared with third party which shall not be in the business interest of BHEL Electronics Division, Bangalore.

(Signature, date & seal of
Authorized Signatory of the bidder)

Date:

Form No: F-09 (Rev 00)Please Fill up the form in **CAPITAL LETTERS** only.**1.9 Paylink Direct Credit Form**Please Fill up the form in **CAPITAL LETTERS** only.

TYPE OF REQUEST(Tick one): _____ CREATE _____ CHANGE

BHEL Vendor / Supplier Code:

Company Name :

Permanent Account Number(PAN):

Address

City:

PINCODE

STATE

Contact Person(s)

Telephone No:

Fax No:

e-mail id:

1 Bank Name:

2 Bank Address:

3 Bank Telephone No:

4 Bank Account No:

5 Account Type: Savings/Cash Credit

6 9 Digit Code Number of Bank and branch

appearing on MICR cheque issued by Bank

7 Bank swift Code(applicable for EFT only)

8 Bank IFSC code(applicable for RTGS)

9 Bank IFSC code(applicable for NEFT)

I hereby certify that the particulars given above are true, correct and complete and that I, as a representative for the above named Company, hereby authorise BHEL, EDN, Bangalore to electronically deposit payments to the designated bank account.

If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold BHEL / transferring Bank responsible.

This authority remains in full force until BHEL, EDN, Bangalore receives written notification

Requesting a change or cancellation.

I have read the contents of the covering letter and agree to discharge the responsibility Expected of me as a participant under ECS / EFT.

Date:

Authorised Signatory:

Designation:

Company Seal

Telephone NO. with STD Code

Bank Certificate

We certify that _____ has an Account No _____ with us and

we confirm that the bank details given above are correct as per our records.

Date:

(.....)

Place:

Signature

Please return completed form along with a blank cancelled cheque or photocopy thereof to:

Bharat Heavy Electricals Ltd,

Attn: Electronics Division, Mysore Road, BANGALORE -560

026

In case of any Query, please call : 080-

26998403 or fax no. 080-26749217

1.10 CAPACITY EVALUATION OF BIDDERS FOR CURRENT TENDER

Form No: F-11 (Rev 00)

SL NO.	DESCRIPTION OF WORK (Similar to Tendered Scope)	WORK ORDER REF & DATE	CONTRACT VALUE (Rs. LACS)	CUSTOMER NAME & ADDRESS	CURRENT STATUS OF THE JOB ALONG WITH LATEST MILE STONE COMPLETED	%AGE OF WORK COMPLETED	VALUE OF BALANCE WORK (Rs. Lacs)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

NOTES:

1. BIDDERS ARE REQUIRED TO FURNISH ALL THE JOBS OF SIMILAR NATURE WHICH THEY ARE EXECUTING (IN PROGRESS) AT THE TIME OF SUBMISSION OF TENDER, AS PER ABOVE FORMAT.
2. BIDDERS HEREBY UNDERTAKE THAT THEY HAVE FURNISHED THE DETAILS SOUGHT AS PER POINT NO. 1 IN TOTALITY AND THAT THE DETAILS FURNISHED IS COMPLETE IN ALL RESPECT.
3. BHEL WILL TAKE APPROPRIATE ACTION AS DEEMED FIT , IN CASE, IT IS FOUND AT A LATER DATE THAT THE CONTRACTOR HAD SUPPRESSED THE FACTS AND HAVE NOT FURNISHED THE CORRECT & COMPLETE INFORMATIONS.

DATE :
PLACE

Name, Designation & Seal of Bidder

1.11 CONTRACT AGREEMENT

BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)

Electronics Division P.B.No.

2606,Mysore RoadBangalore-560026

AGREEMENT NO.

NAME OF WORK	
NAME OF THE CONTRACTOR WITH FULLADDRESS	
VALUE OF WORK AWARDED	
LETTER OF INTENT NO.	
TIME ALLOTTED FOR COMPLETING THEWORK (DATE OF COMPLETION)	

SIGNATURE OF CONTRACTOR

(SIGNATURE OF BHEL OFFICER)

CONTRACT AGREEMENT

THIS AGREEMENT MADE THIS _____ DAY OF _____ between BHARAT HEAVY ELECTRICALS LIMITED (A Government of India Enterprise) a Company incorporated under the Companies Act, 1956, having its Registered Office at BHEL House, Siri Fort New Delhi- 110049 (herein after called BHEL) of the ONE PART.

AND

M/S

(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 _____ issued by BHEL for execution of _____ the contractor submitted their offer No. _____ 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 references cited therein.

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

1. That the contractor shall execute the work of _____ and more particularly described in Tender Specification No _____ including Drawings and Specifications (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.

2. The Contractor is required to furnish to BHEL Security deposit in the form of cash/ approved securities/ Bank Guarantee valid upto _____ for a sum of Rs. _____ towards satisfactory performance and completion of the Contract.

3. The Contractor has furnished a Bank Guarantee bearing no. _____ dated _____ for a sum of Rs. _____ executed by _____ in favour of BHEL towards Security Deposit valid upto _____

OR

The Contractor has furnished to BHEL an initial Security Deposit of Rs. _____ in the form of cash / approved Securities/ B.G No. _____ dated _____ for Rs. _____ executed by _____ in favour of BHEL valid upto _____ 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.

OR

The contractor has furnished to BHEL an initial Security Deposit of Rs. _____ (Rs. _____ vide Bank draft No. _____ dated _____ and by adjusting EMD of Rs. _____ submitted vide Bank draft No. _____ dt _____) and has agreed for recovery of balance Security Deposit by BHEL @ 10% of the value of work done from each running bill till the entire security deposit is recovered.

4. 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 installment 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.-----

OR

In case the contractor furnishes the bank guarantee at a later date the contractor hereby agrees to extend the validity of 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 the amount of bank guarantee given in lieu of security deposit from the bills in one installment and the contractor further agrees that failure to extend the validity of 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.

5. That in consideration of the payments to be made to the Contractor by BHEL in accordance with this Agreement the Contractor hereby covenants 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.

6. 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.

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

8. 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.

9. 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.

10. That whenever under this contract or otherwise, any sum of money shall be recoverable from or 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.

11. 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.

12. 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.

13. 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 hereto contained in these presents and the liability of the Contractor with respect to compensation payable to

BHEL or Contractor's obligations shall remain unaffected.

14. It is clearly understood by and 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.

15. The following documents

1. Invitation to Tender No
and the documents specified therein.

2. Contractor's Offer No dated

.....

3.

4.

5.

6. Letter of Intent No dated

7.

shall also form part of and govern this Agreement.

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

WITNESS

(to be signed by a person holding

1. a valid Power of Attorney)

2.

(CONTRACTOR)

WITNESS

(For and on behalf of BHEL)

1.

2.

1.12. Bank Guarantee:

Form No. : F-13(Rcv 00)

PROFORMA OF BANK GUARANTEE (in lieu of SECURITY DEPOSIT)

In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at through its Unit at _____ (name of the Unit) having agreed to exempt (Name of the Vendor / Contractor / Vendors) with its registered office at _____ (hereinafter called the said "Contractor" which term includes vendors), from demand under the terms and conditions of the Contract reference No. _____ dated _____ valued at Rs. (Rupees

-----) (hereinafter called the said Contract), of Security Deposit for the due fulfilment by the said Contractor of the terms and conditions contained in the said Contract, on production of a Bank Guarantee for Rs. only),

we ____ (indicate the name and address of the Bank) having its Head Office at _____ (address of the head Office) (hereinafter referred to as the Bank), , at the request of [Contractor(s)], being the Guarantor under this Guarantee, do hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer, , an amount not exceeding Rs. _____ without any demur, immediately on demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

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 undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any Court or Tribunal or Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this guarantee shall be a valid discharge of our liability for payment hereunder and the Contractor(s) shall have no claim against us for making such payment.

We, 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 Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied & the Employer certifies that the terms and conditions of the said Contract have been fully and properly carried out by the said contractor(s) or acceptance of the final bill or discharge of this guarantee by the Employer, whichever is earlier. This guarantee shall initially remain in force upto and including 6 and shall be extended from time to time for such period as may be desired by the Employer. Unless a demand

or claim under this guarantee is made on us in writing on or before the
, we shall be discharged from all the liability under this guarantee thereafter.

We,____(indicate the name of the Bank)____further agree with the Employer that the Employer 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 Contract or to extend time of performance by the saidcontractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by any 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 the Employer or any indulgence by the Employer 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 ofso relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

We,..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....
- b) This Guarantee shall be valid up to
- c) Unless the Bank is served a written claim or demand on or before__all rights under thisguarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We,_____Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

Date_____Day of _____
for_(indicate the name of the Bank) (Signature of Authorised signatory)

Bank Guarantee No:

Date:

1.13 INDEMNITY BOND

Form No.:F-19(Rev 00)

(To be executed on a Non Judicial Stamp Paper of the requisite value as per Stamp Duty prevalent in the respective State)

This Indemnity Bond executed by <name of company> having their Registered Office at <xxxxxxxxxx> in favour of M/s Bharat Heavy Electricals Limited, a Company incorporated under the Companies Act, 1956, having its Registered Office at BHEL House, Siri Fort, Asiad, New Delhi - 110049 through its Unit **Electronics Division, PB No. 2606, Mysore Road ,Bangalore, Karnataka** State. (Hereinafter referred to as the Company)

And whereas the Company has entered into a Contract with M/s xxxxxxxx, the executants of this Deed (hereinafter referred to as the Contractor) as its contractor in respect of the work of "xxxxxxxxxxxxxxxxxxxxxxxxxxxx".

AND WHEREAS under the provisions of GCC further stipulates that the Contractor shall indemnify the Company against all claims of whatever nature arising during the course of execution of Contract including defects liability period of <xx Months

> i.e till <xx xx xxxx>

Now this deed witness that in case the Company is made liable by any Authority including Court to pay any claim or compensation etc. in respect of all labourers or other matters at any stage under or relating to the Contract with the Contractor, the Contractor hereby covenants and agrees with the Company that they shall indemnify and reimburse the Company to the extent of such payments and for any fee, including litigation charges, lawyers' fees, etc, penalty or damages claimed against the Company by reason of the Contractor falling to comply with Central/States Laws, Rules etc, or his failure to comply with Contract (including all expenses and charges incurred by the Company).

The Contractor further indemnifies the Company for the amount which the Company may be liable to pay by way of penalty for not making deductions from the Bills of the Contractor towards such amount and depositing the same in the Government Treasury.

The Contractor further agree that the Company shall be entitled to withhold and adjust the Security Deposit and/or withhold and adjust payment of Bills of

(To be executed on a Non Judicial Stamp Paper of the requisite value as per Stamp Duty prevalent in the respective State)

Contractor pertaining to this Contract against any payment which the Company has made or is required to make for which the Contractor is liable under the Contract and that such amount can be withheld, adjusted by the Company till satisfactory and final settlement of all pending matters and the Contractor hereby gives his consent for the same.

The Contractor further agrees that the terms of indemnity shall survive the termination or completion of this contract.

The contractor further agrees that the liability of the contractor shall be extended on actual basis notwithstanding the limitations of liability clause, in respect of :

1. breach of terms of contract by the contractor
2. breach of laws by the contractor
3. breach of Intellectual property rights by the contractor
4. breach of confidentiality by the contractor

Nothing contained in this deed, shall be construed as absolving or limiting the liability of the Contractor under said Contract between the Company and the Contractor. That this Indemnity Bond is irrevocable and the condition of the bond is that the Contractor shall duly and punctually comply with the terms and the conditions of this deed and contractual provisions to the satisfaction of the Company.

In witness where of M/s xxxxxxxxxxxx these presents on the day, month and year first, above written at xxxxxxxx by the hand of its signatory Mr. xxxxxxxxxxxx.

Signed for and on behalf of M/s xxxxxxxxxxxxxxxx

Witness:

- 1
- 2

1.14 CONSORTIUM AGREEMENT
Form No.:F-20(Rev 00)

(To be executed on Rs. 50/- Non – Judicial Stamp Paper)

THIS AGREEMENT is made and executed on this _____ day of _____, by and between (1) M/s _____, (The First Party, i.e, the Bidder) a company incorporated under the Company's Act 1956, having its registered office at _____ (herein after called the "Bidder", which expression shall include its' successors, administrators, executors and permitted assigns) and (2) M/s _____, (The Second Party, i.e, the associates), a company incorporated under the Company's Act 1956, having its registered office at _____ (herein after called the " Associates", which expression shall include its' successors, administrators, executors and permitted assigns).

WHEAEAS the Owner, Bharat Heavy Electricals Ltd, a Government of India Undertaking, proposes to issue / issued an NIT (herein after referred to as the said NIT) inviting bids from the individual Bidders for undertaking the work _____ of _____, at _____ (herein after referred to as the said works).

WHEREAS the said NIT enables submission of a bid by a Consortium subject to fulfillment of the stipulations specified in the said NIT.

AND WHEREAS M/s _____ (The First Party, i.e, the Bidder) will submit its proposal in response to the aforesaid invitation to _____ bid by the Owner for _____ as detailed in the Bid doc. no. < TENDER REF >

AND WHEREAS M/s _____ (The First Party, i.e the Bidder) itself is meeting all the qualifying requirements except the qualifying requirements of _____ (as detailed in the NIT) and in order to fully meet the qualifying requirements of NIT, this tie-up agreement is being entered into with M/s _____ (The Second Party, the Associates) , who fully meet the balance part of the said works(_____).

WHEREAS the First Party and the Second Party are contractors engaged in the business of carrying out various items of works. WHEREAS the two parties have agreed to constitute themselves into a consortium for the purpose of carrying out

the said works, and that the consortium will be continued till the completion of the works in all respects.

WHEREAS the parties have agreed to certain terms and conditions in this regard:

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS :

1. First and Second parties hereby constitute themselves into a Consortium for the purpose of bidding and undertaking the said work pursuant to the said NIT as hereinafter stated.
2. The First Party will be the leader (Lead Partner) and will be responsible for the entire works.

CONSORTIUM AGREEMENT

3. The First Party shall undertake the following part(s) of work detailed in the _____ NIT namely

4. The Second Party shall undertake the following part(s) of work detailed in the said NIT namely

5. The parties hereby declare and confirm that each of them will fulfill the required minimum qualifying requirements as prescribed in the said NIT for the works agreed to be undertaken by them as stated here-in-above.
6. It is also agreed between the parties hereto that all of them shall be individually and severally responsible for the completion of the said works as per the schedule. Further, if the Employer/Owner sustains any loss or damage on account of any breach of the Contracts, we the, Consortium partners individually and severally undertake to promptly indemnify and pay such losses /damages caused to the Employer/Owner on its written demand without any demur, reservation, contest or protest in any manner whatsoever.
7. The parties hereby agree and undertake that they shall provide adequate finances, suitable Tools, Plants, Tractors, Trailers, other transportation equipment, other Tools & Plants, Measuring & Monitoring Equipments (MMEs), Men and Machinery etc. for the proper and effective execution of the works to be undertaken by them as specified here-in-above.
8. It is agreed inter se between the parties hereto that all the consequences liabilities etc., arising out of any default in the due execution of the said works shall be borne by the party in default, that is by party in whose area of works default has occurred, provided

however, so far as M/s Bharat Heavy Electricals Limited is concerned, all the parties shall be liable jointly and severally.

IN WITNESS HEREOF the parties above named have signed this agreement on the day month and year first above written at (Place) .

WITNESS

For

1. NAME

(FIRST PARTY)

2. OFFICIAL ADDRESS

WITNESS

For

1. NAME

(SECOND PARTY)

2. OFFICIAL ADDRESS

[The successful bidder shall have to execute the " JOINT DEED OF UNDERTAKING " in the format to be made available by BHEL at the time of awarding].

Form No.:F-23(Rev 00)

1.15 POWER OF ATTORNEY for SUBMISSION OF TENDER/SIGNING CONTRACT AGREEMENT

(To be typed on non judicial Stamp Papers of appropriate value as applicable and Notarised)

KNOW ALL MEN BY THESE PRESENTS, that I/We do hereby make, nominate, constitute and appoint Mr
 , whose signature given below herewith to be
true and lawful Attorney of M/s..... hereinafter called
„Company“, for submitting Tender/entering into Contract and inter alia, sign, execute all papers and to do necessary
lawful acts on behalf of Company with M/s Bharat Heavy Electricals Ltd, Electronics Division, Bangalore , in
connection with

.....
.....
.....
..... vide Tender Specification No : _____,
dated _____.

And the Company do hereby agree to ratify and confirm all acts, deeds, things or proceedings as may be lawfully
done by the said attorney and by or on behalf of the company and in the name of the company, by virtue of
the powers conferred herein and the same shall be binding on the company and shall have full force and effect.

IN WITNESS WHEREOF the common seal of the company has been hereunto affixed in the manner
hereinafter appearing on the document.

Dated at _____, this _____ day of

Director/CMD/Partner/Proprietor

Signature of Mr... (Attorney)

Attested by: Director/CMD/Partner/Proprietor

Witness

Notary Public

1.16 SOLVANCY CERTIFICATE

[to be issued by Banks as mentioned in the attached list]Ref:

This is to certify that M/s. _____ having _____ their
Registered Office at _____ is solvent to the
extent of Rs. _____ [Amount in Words _____] as disclosed by the
information and record which are available with the bank.

This certificate is issued at the request of M/s. _____ for
a Tender Purpose.

This certificate is issued without any risk/liability or responsibility whatsoever on the part of the Bank
or any of its officers.

For Bank

Name of Signatory

1.17 List of Consortium Bank

	Nationalised Bank		Nationalised Bank
1	Allahabad bank	19	Vijaya Bank
2	Andhra bank		Public Sector Banks
3	Bank of Baroda	20	IDBI
4	Canara Bank		Foreign bank
5	Corporation bank	21	CITI Bank N.A
6	Central bank	22	Deutsche Bank AG
7	Indian Bank	23	The Hongkong and Shanghai Banking Corporation Limited
8	Indian Oversea Bank	24	Standard Chartered Bank
9	Oriental bank of Commerce	25	The Royal Bank of Scotland N.V.
10	Punjab National Bank	26	J P Morgan
11	Punjab & Sindh Bank		Private bank
12	State Bank of India	27	Axis Bank
13	State Bank of Hyderabad	28	The Federal Bank Limited
14	Syndicate Bank	29	HDFC
15	State Bank of Travancore	30	Kotak Mahindra Bank
16	UCO Bank	31	ICICI
17	Union Bank of India	32	Indusind Bank
18	United Bank of India	33	Yes Bank

22.0 GENERAL CONDITIONS OF CONTRACT

It is hereby agreed by me / us that the BHEL General Conditions of Contract including subsequent amendments / additions / deletions to clauses if any, and conditions pertaining the settlement of disputes by Arbitration form an integral part of the tender documents and that the tender submitted by me/ us is subject to the aforesaid BHEL General Conditions of Contract 2019 which has been read and accepted by me/us.

24.0 VI . PART II - PRICE BID

PRICE BID FORMAT

TENDER NO: **BHEL-EDN/PES-SS/MCF MEMU/2021-22/01** dated 25/01/2023 **DUE DATE: 13-02-2023**

Name of Work: -Handling & installation of equipment including complete wiring work in 3PH MEMU coaches at MCF Raebareli .

Contract work is defined for 2 basic units and one unit comprises of 1 DMC and 3 TCs.

Contract shall be awarded in multiples of basic unit.

PRICE BID FORMAT : PART II				
TENDER NO.: BHEL-EDN/PES-SS/MCF MEMU/2021-22/01 dated 25/01/2023 DUE DATE: 13-02-2023				
Name of Work : Handling and Installation of Equipment including complete wiring work and commissioning support in 3PH MEMU coaches at MCF Raebareli				
PRICE BID FORMAT				
Sr.No.	Description of Work	Rate per Basic Unit (BU)Rs.	Quantity(BU)	Total (Rs.)
1	Handling and Installation of equipment including complete wiring work and commissioning support in 3PH MEMU coaches at MCF Raebareli including material supply mentioned in tender document . 1 Basic Unit (BU) = 1DMC(Driver Motor Coach) + 3 TC (Trailing Coach)		2	
	GST @18% (present rate)			
	TOTAL with GST (Rs.)			

TOATAL AMOUNT FOR 2 UNITS (IN FIGURES) :

TOATAL AMOUNT FOR 2 UNITS (IN WORDS) :

Note:

Evaluation is based on the total amount for 2 units
