



Bharat Heavy Electricals Limited
Electronics Division, Mysore Road, Bangalore – 560 026.



BHARAT HEAVY ELECTRICAL LTD
ELECTRONICS DIVISION
MYSORE ROAD, BANGALORE-560026

TENDER DOCUMENT

NAME OF THE WORK:

AMC FOR BHEL EDN MAKE PROPULSION SYSTEM
(TRACTION CONVERTER, AUXILIARY CONVERTER AND
VEHICLE CONTROL UNIT)

AT
ELECTRIC LOCO SHED, LALLAGUDA, HYDERABAD AND
ELECTRIC LOCO SHED, TUGHLAKABAD

OPENING DATE: 14.07.2017

THIS TENDER DOCUMENT CONTAINS 36 PAGES

To,
M/s



Phone: 26998899/26989263

NOTICE INVITING TENDERS

01. Tender Reference : PES/AMC/2017
Date: 22.06.2017
02. Name of the work : Annual Maintenance Contract for BHEL-EDN make Propulsion System for 6000HP Locomotives comprising of Traction Converters, Auxiliary Converters and Vehicle Control Unit at Electric Loco Shed, Lallaguda and at Electric Loco Shed, Tughlakabad
03. Period of contract : 02 Years
04. Estimated Cost : Rs. 40.00 Lakhs (For Two years based on 1- Engineer in Electrical / Electronics Engineering, 2 Diploma Holders, 2 – ITI Holders and 1 – Office boy) for each shed
05. Earnest Money Deposit : Rs. 80000/- for each shed
06. Last Date & Time for the Receipt of Completed Tender. : **Before 1.00 PM on 14.07.2017**
07. Date & Time for Tender Opening (Technical Bid) : **At 1.30 PM on 14.07.2017**
08. Place of submission of completed Tender: Tender document shall be dropped at Tender box kept at Reception BHEL, Electronics Division, Mysore Road, Bangalore -26. Or send by Register post /Speed Post / Courier with Acknowledgement due to Mr. Kathavarayan T, Senior Deputy General Manager (PES- Traction Services) BHEL - Electronics Division Mysore Road, Bengaluru – 560026 INDIA

Phone:+91 80 26989263 Mobile: +91 9945568518 email:
kathavarayan@bheledn.co.in



This tender document contains 36 pages including the following.

I. Technical Bid : Pages from 1- 34 (part-I)

- a) Technical-cum-commercial Bid
- b) Instructions to tenderers
- c) Scope of Work

II. Price Bid : Pages – 35 and 36 (part-II)

- Note:**
1. The tenderer shall read the tender documents carefully and fill all the columns neatly. Incomplete tenders will be rejected.
 2. The tenderer shall return the duly filled in tender document after affixing signature on all pages.
 3. **The tenderer has the option of quoting any one of the sheds or both.** However, Tenderer shall fill both the sheets provided for the sheds separately. In case of not quoting for any one of the sheds, Tenderer shall mention “not quoted” in the sheet provided for such shed and submit it along with the other sheet wherein the quote is provided.
 4. The Tenderers shall ensure and put “Technical cum Commercial bid (Part – I)” & “Instructions to Tenderers” together in one cover and “Schedule of Work / Price bid (Part – II)” in a separate cover. Both these covers shall be separately sealed and then put together in a single cover and sealed. All the sealed covers shall be properly identified with necessary information such as Tender reference, type of document put inside, date of tender opening to enable to open the correct document cover only.



PART-1

TECHNICAL-CUM-COMMERCIAL BID
(AMC FOR BHEL EDN MAKE PROPULSION SYSTEM)
(To be furnished by the Bidder)

Name of work: Annual Maintenance Contract for BHEL EDN make Propulsion System
at Electric Loco Shed, Lallaguda and at Electric Loco Shed, Tughlakabad

Tender Ref : PES/AMC/2017 dated 22.06.2017

A) : Information Part :

S.N .	Particulars	To be filled by Bidder
1.0	Name of the Contractor	
2.0	Address (Office)	
3.0	Address (Residence)	
4.0	Telephone Number	
	Office	
	Residence	
	Mobile No.	
5.0	Email id.	
6.0	Technical Staff Details (Use separate sheet if reqd.)	Furnished/ Not Furnished
7.0	Working Staff Details (Use separate sheet if reqd.)	Furnished/ Not Furnished



B) : Essential Criteria for Techno-Commercial Acceptance of Bid

S.N	Particulars	To be filled by Bidder
1.0	Experience Certificate for successfully having completed similar works during immediate last 7 years as mentioned below: <i>(Similar work means working with High Voltage equipments)</i> One work not less than Rs. 16.00 Lakhs or Two works of not less Rs. 10.00 Lakhs or Three works of not less than Rs. 8.00 Lakhs (Copy of performance report from the organization where the work is executed is to be enclosed. Submission of Work Order copy is not adequate)	
2.0	Average Turn Over of the last three years (not less than Rs 6.00 lakhs/year)	
2.1	Turn over - Previous financial year	Rs.
2.2	Turn over - 1 year before previous financial year	Rs.
2.3	Turn over- 2 years before previous financial year	Rs.
3.0	Whether Registered with ESI / PF Authority	Yes/ No
3.1	If Yes, indicate PF Registration No. (Copy of last month contribution paid receipt to be enclosed)	Enclosed / Not enclosed
3.2	If Yes, indicate ESI Registration No. (Copy of last month contribution paid receipt to be enclosed)	Enclosed / Not enclosed
3.3	If No, Is the tenderer willing to pay the ESI and PF contribution subject to BHEL Terms and conditions.	Yes/No
4.0	Security Deposit Clause as per NIT	Acceptable/ Not Acceptable
5.0	The bidder should have office in Hyderabad for Lallaguda and in NCR for Tuklagabad with land line/mobile telephone and E-mail for emergency contact. Please provide address, Phone numbers & E-mail ID.	Details:

Note: If any of the above mentioned criteria is not met the bid will be rejected



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C) : Other Conditions:

10	Form of EMD furnished (Cheque is not acceptable)	DD/ Pay Order
1.1	Cash (receipt No. and Date)	
1.2	DD Particulars	
2.0	General Conditions of Contract & NIT	Acceptable/ Not Acceptable
3.0	Contract period mentioned in NIT	Acceptable/ Not Acceptable
4.0	Payment Terms defined in NIT	Acceptable/ Not Acceptable
5.0	PAN No. of Tenderer (Copy of the same to be enclosed)	Enclosed/Not enclosed
6.0	Service Tax registration No. of Tenderer (Copy of the same to be enclosed)	Enclosed/Not enclosed



INSTRUCTIONS TO TENDERERS

Name of work: Annual Maintenance Contract for BHEL EDN make Propulsion System (Traction converter, Auxiliary Converter, Vehicle Control Unit)

1. Sealed Tenders for the above noted works are hereby invited from Contractors experienced in works of similar kind and magnitude.
2. Tenders should be addressed to SDGM (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.
 - 2.1 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.
3. All entries in the tender documents should be in the same ink. Erasures and over writing are not permitted. The tenderer concerned with proper indication of the name, designation and address of the person signing should duly sign all cancellations and insertions.
4. 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.
5. 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 (see clauses 8, 37 and Annexure 'C'). The tenderers shall fill amount of each item and the total on each sheet as also the grand total amount of the whole contract.
6. 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:
 - 6.1 If in the price structure quoted for the required goods, 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.
 - 6.2 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



- 6.3 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 subject to 6.1 and 6.2 above.
- 6.4 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.
7. 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.
8. The rates to be quoted by the tenderer shall be firm and should consist of all taxes including VAT/GST. The service tax should be quoted in the service tax column in Price Bid. The service 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.
9. (a) The rates quoted in the tender shall remain valid for a period of 'THREE MONTHS' from the date of opening of tender.
- (b) 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.
10. 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.
11. 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.
12. 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.



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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.

13. 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.
14. In case, the date of tender opening falls on Holiday, the tender will be opened on the next working day.
15. 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 in accordance with Clause – 16 of the BHEL General Conditions of the Contract. Tenders without Earnest Money Deposit receipts are liable to be rejected. No interest will be paid on the earnest money deposits.
16. The EMD may be submitted in following forms:
 - a) Cash deposit as permissible under the extant of Income Tax Act (before tender opening only)
 - b) Electronics fund transfer credited in BHEL account. (before tender opening only)
 - c) Banker's Cheque/ Pay Order/ Demand Draft In favour of BHEL (along with offer.)
 - d) Deposit using 'SBI Collect' to BHEL account and e-receipt can be submitted along with bid
Process: 1. Go to <https://www.onlinesbi.com> 2. Select SB Collect from the top menu. 3. Accept terms and conditions and proceed. 4. Select state as Karnataka. 5. Select Type as Industry. 6. Select 'BHARAT HEAVY ELECTRICAL LTD' AND SUBMIT. 8. Select payment category ' Others' and subcategory as EMD and make payment.
17. MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (Two years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with attested copy of a CA certificate (Format enclosed at Annexure -1(Refer Page No.31) where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefits shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer.



18. 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.
19. 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.
20. 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.
21. 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.
22. 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.
24. 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.
25. The Contractor’s responsibility under this contract shall commence from the date of receipt of the order or acceptance of his tender.
26. **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.”
27. 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).



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28. 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.
29. 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.
30. Words imparting the singular number shall be deemed to include the plural number and vice-versa where the context so requires.
31. The General and Special Conditions of Contract are complementary to each other and where they are in conflict, the special condition shall prevail.
32. The expenses for completing the stamping the agreement shall be paid by the contractor.
33. Unless and otherwise stated all tendered work includes supply, erection, testing and commissioning of equipment as agreed to in the contract.
34. After completion of the job, the contractor has to furnish details of actual work done in consultation with Engineer-in-charge.
35. Any covering letter and comments of the Contractor should be submitted in duplicate along with the offer.
36. The Contractor shall provide all the materials needed for maintenance, testing including chemicals, and consumables etc. which are not supplied by BHEL. In quoting their rates, the Contractors are advised to take into account the cost of the above materials.
36. 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 share holder'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.
37. 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 G.C.C are enclosed (Annexure containing extracts of clauses 20, 38 (Deleted) and 58 of BHEL GCC). The contractor has to obtain, at his cost, a copy of the BHEL GCC, scrutinize the



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same, and when submitting his tender, indicate his acceptance of BHEL GCC in the proforma enclosed at Annexure - B.

- 38 All operations to be carried out by the Contractor during the execution of the contract such as drilling, welding etc., shall be done with proper equipment brought by the tenderer. Suitable power point will be provided by shed and tapping from the power point to equipment shall be done using proper size of cable, equipment and after getting approval of connections from our Engineer-in-charge.
- 39 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".
- 40 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.
- 40.1 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.
- 40.2 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.
- 41 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
- 42 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.



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

44 TERMS OF PAYMENT:

Payment will be made monthly on pro-rata basis against your invoice after Satisfactory Services for each month. Attendance Record and Time sheet and joint notes signed with customer to be attached along with the invoice.

45 SECURITY DEPOSIT

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

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

- I. Cash (as permissible under the Income Tax Act)
- II. Local Cheques of scheduled Banks (subject to realization)/Pay Order/ Demand Draft /Electronic Fund Transfer in favour of BHEL
- III. Securities available from Post Offices such as National Savings Certificates, Kisan Vikas Patras etc. (Certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back)
- IV. Bank Guarantee from scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.
- V. Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/C. BHEL, duly discharged on the back.
- VI. Security Deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of Security Deposit shall be deposited before start of the work and the balance 50% may be recovered from the running bills.
- VII. EMD of the successful tenderer shall be converted and adjusted against the security deposit.
- VIII. The Security deposit shall not carry any interest.
- IX. Security Deposit can be deposited using 'SBI Collect' to BHEL account and e-receipt can be submitted.



NOTE: Acceptance of Security Deposit against Sl. No. (iii) and (v) above will subject to hypothecation or endorsement on the document in favour of BHEL-EDN. However, BHEL will not be liable or responsible in any matter for the collection of interest or renewal of the documents or in any other matter connected therewith.

46 REVERSE AUCTION

“BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on www.bhel.com) instead of opening the sealed envelope price bid, submitted by the bidder. 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).

The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along with the offer. The envelope sealed price bid of successful L1 bidder in RA, if conducted, shall also be opened after RA and the order will be placed on lower of the two bids (RA closing price envelope sealed price) thus obtained. The bidder having submitted this offer specifically agrees to this condition and undertakes to execute the contract on thus awarded rates.

If it is found that L1 bidder has quoted higher in online sealed bid in comparison to envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender in the unit, it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com).”

As a reminder to the bidders, system will flash following message (in RED Color) during the course of ‘online sealed bid’:

“Bidders to submit online sealed bid less than or equal to their envelope sealed bid already submitted to BHEL”



SCOPE OF WORK:

I) LIST OF EQUIPMENTS COVERED UNDER AMC:

Sl. No.	DESCRIPTION OF EQUIPMENTS
01	Traction Converter – Water cooled Traction Converter consisting of a. Power Modules b. Earth Switch c. Drive Control Unit d. Vehicle Interface Unit e. Contactors f. Pump and all connected electrical and mechanical equipments with accessories etc.
02	Auxiliary Converter – Air cooled Auxiliary Converter consisting of a. Rectifier Module b. Buffer Module c. Inverter Module d. Battery Charger Module e. ACI Module f. Breaker and all connected electrical and mechanical equipments with accessories etc.
03	Vehicle Control Unit – Consisting of a. ICP Module b. Input Modules c. Output Modules and all connected electrical and mechanical equipments with accessories etc.

- II)** The scope of contract covers preventive maintenance and breakdown maintenance:
- Preventive maintenance has to be carried out as per the PM schedule drawn by BHEL.
 - Breakdown maintenance and repair/replacements to ensure satisfactory running of locomotive will be carried out on BHEL/IR lodging the complaint either by phone/email/fax/letter. The repair/servicing shall be under taken within 3 hrs of the complaint.



III) THE SERVICING SHALL INCLUDE: -

- 1) The equipments are to be maintained at their working capacity and by carrying out preventive maintenance, as per the checklist for all of the above equipments / accessories as per the schedule.

Periodicity and duration (time taken) for various schedules				
	WAP5/WAP7 locomotive		WAG9/WAG9H Locomotive	
Maintenance Schedule	Periodicity	Time Taken	Periodicity	Time Taken
Trip Inspection	3000kms. Or one trip whichever is later	2 hrs	45 days	4 hrs
IA	90 days	6 hrs	90 days	6 hrs
IB	180 days	6 hrs	180 days	6 hrs
IC	270 days	8 hrs	270 days	8 hrs
MOH	18 months	6 working days	18 months	6 working days / 8 working days for 2 nd MOH
IOH	4.5 years \pm 6 months or 12 lakh kms. Whichever is earlier	11 working days (WAP7) / 20 working days (WAP5)	6 years \pm 6 months or 12 lakh kms. Whichever is earlier	11 working days
POH	9 yrs. \pm 6 months or 24 lakh kms. Whichever is earlier	28 days	12 yrs. \pm 6 months or 24 lakh kms. Whichever is earlier	28 days

MUST CHANGE ITEMS OF WAP 7, WAG9 AND WAG9H LOCOMOTIVES.				
SN	DESCRIPTION	MOH	IOH	POH
1	Traction Converter			
	The rubber hoses of the power module (both inlet & outlet)	X	X	√
	The air cooling hoses, seals on the traction converter doors.	X	X	√
	Converter coolant	X	√	√
	Contact tips of Electro-magnetic contactors.	X	X	√
	Internal cooling fans.	X	√	√
	Pressure switch	X	√	√
2	TCN based VCU and Electronics of Power Converter & Auxiliary Converter			
	Instrument cooling fans.	X	√	√
	Replace the back-up batteries in the DDU and back-light tube	X	√	√
3	Auxiliary Converter			
	Gasket of CREC, ACPS and LVPS modules.	X	X	√
	Seals on the Aux. Converter cabinets	X	X	√
	Internal cooling fans.	X	√	√
	Sine wave filter capacitors	X	X	√



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MINOR MAINTENANCE SCHEDULE FOR WAP7, WAG9 & WAG9H LOCOMOTIVES				
SL. No	Equipment	IT	IA/IB	IC
1	TRACTION CONVERTER			
	Check the coolant level indicator situated on the conservator (Expansion Tank). If the coolant is below the minimum mark-top up with the specified coolant. Check for any signs of leakage.	√	√	√
	Visually examine pipe joints for leaks, loose or missing screws and correct as necessary.	√	√	√
	Examine the two flange joints for leaks, loose or missing screws. Check gaskets/coolant seals, if dismantling is required.	√	√	√
	Examine all electrical equipment of traction converter for signs of dirt, corrosion, damage etc. Remove all dust/dirt deposits from the connection insulators. Don't open power module compartment before IOH	X	√	√
	Clean the isolating blade and spring contact of earth switch. Lightly lubricate with the specified grease.	X	X	√
	Check high voltage indicator	√	√	√
2	AUXILIARY CONVERTER CUBICLES			
	Check high voltage indicators	√	√	√
	All EP contactors, re-grouping contactors to be checked and replace, if found defective	X	√	√

Note	Cleaning by vacuum cleaner	X	√	√
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MAJOR OVERHAUL SCHEDULE FOR WAP 7, WAG9 & WAG9H LOCOMOTIVES				
SL. No	Description	MOH	IOH	POH
1	IGBT based Traction Converter			
	General remark: keep power module compartment closed as long as possible, no maintenance needed before IOH			
	Inspect the cubicle with respect to mechanical and electrical integrity. Check all fixings for security and tightness and all wiring are secured and insulations are not damaged, burnt or eroded. Visually inspect all components for physical damage.	X	√	√
	Visually inspect the soft crow bar resistor for evidence of overheating, bending of resistor tapes, discoloration of the resistors or its case, or burn marks. Measure the impedance of the fault detection and MUB resistors.	X	√	√
	Visually inspect the traction converter earthing and discharge resistors for signs of overheating.	√	√	√
	Replace any resistor that is damaged or defective.	√	√	√
	Clean the series resonant and DC link capacitors.	X	√	√
	Check the DC link and series resonant circuit capacitor bank electrical connections. Tighten the fasteners if necessary.	X	√	√



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	Test the voltage indicator. Replace, if required.	X	√	√
	Overhaul the pre-charging and main contactors.	√	√	√
	Replace Contact tips of Electro-magnetic contactors.	X	X	√
	Ensure sealing of incoming cable gland of control card rack to avoid dust entry.	√	√	√
	Collect the coolant sample from converter, check for pH value and composition.	√	X	X
	Check the coolant level indicator situated on the conservator. If the coolant is below the minimum mark-top up with the specified coolant. Check for any signs of leakage.	√	X	X
	Replace the coolant	X	√	√
	Examine all (external) pipe/flange joints for any leaks, looseness or missing screws. Correct if necessary.	√	√	√
	Examine all electrical equipment of traction converter for signs of dirt, corrosion, damage etc. Remove all dust/dirt deposits from the connection insulators.	X	√	√
	Replace the air-cooling hoses, seals on the traction converter doors (WAG9/WAG9H).	X	X	√
	Clean the area by lightly blowing any dirt deposit	√	√	√
	Clean power modules and replace rubber hoses (included rubber hose to conservator)	X	X	√
	Overhauling of Earthing switch. Check and clean the isolation blade and spring contacts of earthing switch and lubricate. Check its connections for tightness and intactness.	√	√	√
	Replacement of the internal cooling fans.	X	√	√
	Clean and inspect coolant pump according manufacturer information	√	√	√
	Replace pressure switch	X	√	√
2	TCN Based VCU and Electronics of Power Converter & Auxiliary Converter			
	General remark: Traction and auxiliary converters don't have bus station but single board controllers, no maintenance needed			
	Visually check physical damage and insulation defects	√	√	√
	Check for loose fixing of any connection	√	√	√
	Check the tightness of all parts and cards	√	√	√
	Check the tightness of connectors.	√	√	√
	Replace the back-up batteries in the DDU and back-light tube	X	√	√
	Ensure working of instrument cooling fan.	√	√	√
	Replacement of the instrument cooling fan.	X	√	√
	Check setting of temperature sensor in (VCU only)	X	√	√
	Measure dB loss of Fiber-optic cables. Clean, if required.	X	√	√
	Clean Heat Exchangers at the back of the electronic rack.	X	√	√
3	Auxiliary converter			

General remark: Aux cubicle closed as long as possible, no maintenance needed before IOH			
Inspect the cubicle with respect to mechanical and electrical integrity. Check all fixings for security and tightness and all wiring are secured and insulations are not damaged, burnt or eroded. Visually inspect all components for physical damage.	X	√	√
Check the security of bolted terminals and mechanical mounting of large components of Controlled Rectifier (CREC), Aux. inverter (ACPS) and Battery Charger (LVPS). Remove dust and dirt from insulating and heat convection surface.	X	√	√
Remove dust between the fins of the modules CREC, ACPS and LVPSa	X	√	√
Replace gasket of CREC, ACPS and LVPS module.	X	X	√
Check high voltage indicators	√	√	√
Check the value of DC link capacitance bank, it should be 19.8 mF. Remove dust deposits on the terminal insulators of the capacitors by blowing brushing with a metallic brush or by rubbing with a cloth.	X	√	√
Check the tightness & proper fitment of 3 phase couplers of Aux. Converter	X	√	√
Remove auxiliary converter cubicle, clean inside the auxiliary converter cabinets using a vacuum cleaner. Remove all traces of dust, dirt and debris from the components, cubicle walls and floor.	X	X	√
Clean the reactors and transformers in the auxiliary converter cabinets using compressed air. Remove all traces of dirt, dust and debris.	√	√	√
Clean all dirt and dust deposit from the terminal side of the phase reference transformer. Cleaning is by means of blower	√	√	√
Visually inspect the insulators in the auxiliary converters (BUR) 1,2 & 3 for damage. Replace any damaged insulator.	X	√	√
Visually inspect the sine wave filter for any physical damage and measure the capacitance. Replace any damaged /faulty capacitor.	√	√	√
Replace the seals on the auxiliary converter cabinets and equipment modules.	X	X	√
All EP contactors, re-grouping contactors and replace, if found defective	X	√	√
Replacement of the cooling fans of Buffer and Battery Charger Module.	X	√	√

- 2) Loco should be maintained as per the guidelines given by Indian Railways on Maintenance of IGBT based Propulsion System.
- 3) Special care and attention be given to ensure that no damage is done to the equipment.
- 4) Every breakdown /preventive maintenance service shall be followed by necessary Service Report indicating details of consumables/spares used separately.



IV) TOOLS, TACKLES AND MEASURING INSTRUMENTS:

All the necessary Tools, Tackles and Measuring Instruments required during preventive Maintenance works/Breakdown Maintenance works/Overhauling works/While conducting tests are to be arranged as and when required at no extra cost. List of recommended tools as per Annexure - A

V) GENERAL:

- 1) Returnable materials such as tools, equipments and replacement spares etc brought inside shed shall be entered at our check post to enable you to take them back after the completion of works.
- 2) All the materials such as spares/consumables etc required for service /maintenance work shall be brought with necessary delivery challans duly Endorsed by security at the material gate.
- 3) Service personnel have to report to the Executive In charge/Supervisor in charge immediately after entering into factory premises and before taking up any service /repair works.
- 4) Quarterly analysis of the breakdowns data/service reports to be made and a separate report to be furnished.

VI) PENALTY:

- 1) Penalty for nonperformance if proved will be charged as per the clause 11 of “GUIDELINES REGARDING MAINTENANCE OF IGBT BASED PROPULSION SYSTEM” of Indian Railways CLW/AMC/C-D&D/01 issued on March 2016



ANNEXURE-A

LIST OF RECOMMENDED TOOLS FOR SERVICE				
Sl No	Electrical	RECOMMENDED MAKE	QTY	REMARKS
1	LAPTOP		1	
2	SCARP WINDOW PC TOOL	BHEL	1	Software
4	DIGITAL MULTIMETER	FLUKE 337	1	
5	DIGITAL CLAMP METER	FLUKE 87V	1	
Sl.No	Mechanical TOOL KIT CONTENTS	RECOMMENDED MAKE	QTY	REMARKS
1	CRIMPING TOOL, P.NO.GIW 10V (GIMOTA)	GIMOTA	2	IMP - INR
2	DIE, GIW 10V 12/0.5-1(gimota)	GIMOTA	2	IMP - INR
3	DIE, GIW 10V 16/0.5-1.5	GIMOTA	2	IMP - INR
4	GIW 10V 20/0.5	GIMOTA	2	IMP - INR
5	CRIMPING TOOL, HARTING 09990000191da	HARTING	2	IMP - INR
6	CRIMPING TOOL, HARTING 09990000175	HARTING	2	IMP - INR
7	CRIMPING TOOL, MOLEX 638118700	MOLEX	2	IMP - INR
8	CRIMPING TOOL, MOLEX 638190900	MOLEX	2	IMP - INR
9	CRIMPING TOOL, T&B ERG740{for shield crimping}	T & B	2	IMP - INR
10	DIE RSK 301J FOR ERG740{for shield crimping}	T & B	2	IMP - INR
11	DIE RSK 401L FOR ERG740{for shield crimping}	T & B	2	IMP - INR
12	AMP 91513-1	AMP	2	IMP - INR
13	TORQUE WRENCH 4-20 N.MT	STAHLWILLE	2	IMP
14	TORQUE WRENCH 20-100 N.MT	STAHLWILLE	2	IMP
15	3/8" REV. RATCHET	STAHLWILLE	2	IMP
16	1/2" REV. RATCHET	STAHLWILLE	2	IMP
17	OPEN ENDED INSERT, 10mm A/F	STAHLWILLE	2	IMP
18	OPEN ENDED INSERT, 13mm A/F	STAHLWILLE	2	IMP
19	OPEN ENDED INSERT, 16mm A/F	STAHLWILLE	2	IMP
20	OPEN ENDED INSERT, 17mm A/F	STAHLWILLE	2	IMP
21	OPEN ENDED INSERT, 18mm A/F	STAHLWILLE	2	IMP
22	OPEN ENDED INSERT, 19mm A/F	STAHLWILLE	2	IMP
23	EXTRACTION TOOL MOLEX MINIFIT JNR 11030044	MOLEX	2	IMP - INR
24	MOLEX INSERTION TOOL 11020022	MOLEX	2	IMP - INR
25	EXT.TOOL 11030036	MOLEX	2	IMP - INR
26	DSUB INSERTION-REMOVAL-TOOL 09990000171	HARTING	2	IMP - INR
27	INSERTION TOOL,HAN 09990000059	HARTING	2	IMP - INR
28	REMOVAL TOOL, HAN D 09990000012	HARTING	2	IMP - INR
29	LOCATOR HAN D 099900000311	HARTING	2	IMP - INR
30	DIN41612 REMOVAL TOOL 09990000087	HARTING	2	IMP - INR
31	Mini-stripex/weidmuller AWG 28--17(0.08--1.0)	IDEAL	2	IMP - INR
32	Electric screw driver/ASA-4500S	ASA	2	IMP - INR
33	Tubular type screw (TEPCO-INDIA) driver M3/M4/M5/M6/M8/M10/M12		2	



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34	METAL CUTTER FOR HOSE PIPE/IDEAL 45-121	IDEAL	2	IMP - INR
35	Adjustable screw spanner/375mm(15")& 350mm		2	
36	EXTENDERS/TAPARIA/450mm,9",6",4",2",10" Length		2	
37	TIE GUN HVY 5-8/MS90387-2/GS4H/PANDUIT MAKE	PANDUIT	2	IMP - INR
38	CABLE TIE GUN	T & B	2	IMP - INR
39	EXT.TOOL KIT 91285-1	TYCO ELECTN	2	IMP - INR
40	INSULATION STRIPPING TOOL(10-30AWG)	Z+F	2	IMP
41	Cable cutter (Ratchet type)		2	
42	Ratchet socket-10/13/17/19mm.A/F		2	
43	Open end spanner 20/22,16/17,24/27		2	
44	Open end spanner 36,38,41,50		2	
45	Allen key set. A/F 2.5,3,4,5,6(for size 3,4,5,6,8mm)		2	
46	Universal joint socket 3/8" X 3/8"		2	
47	Insulation stripping tool heavy duty		2	
48	Allen bit 5mm		2	
49	Allen screw driver-M3		2	
50	Multi contact cable stripper 5018		2	
51	Astrol Tool 621205		2	
52	Sockets 13- 1/2 inch		2	
53	Sockets 17- 1/2 inch		2	
54	Sockets 19- 1/2 inch		2	
55	Sockets 10- 1/2 inch		2	
56	Sockets 13- 3/8 inch		2	
57	Sockets 17- 3/8 inch		2	
58	Sockets 19- 3/8 inch		2	
59	Sockets 10- 3/8 inch		2	
60	Hexagonal Die 35,50,70 sq mm		2	
Sl.NO	Safety Equipments		QTY	REMARKS
1	HV Gloves			1 per person
2	HV Shoes			1 per person
3	Helmet			1 per person



ANNEXURE-B

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 from 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 which has been read and accepted by me/us.



ANNEXURE-C

LABOUR COMPLIANCES

The Contractor shall employ labour in sufficient numbers to maintain the required date of progress and of quality to ensure workmanship of the degree specified in the contract and to the satisfaction of the Engineer-in-charge. The contractor shall not employ in connection with the works any person who has not completed his eighteen years of age or incapacitated by any means to work in connection with any part of this contract under any circumstances.

The Contractor shall furnish to the Engineer-in-charge at the intervals specified by him, a distribution return of the number and description by trades of the workpeople employed on the works. The Contractor shall also submit on the 4th and 19th of every month to the Engineer-in-charge a true statement showing in respect of the second half of the preceding month and the first half the current month (i) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them and (ii) the number of female workers who have been allowed maternity benefits as provided in the Maternity Benefit Act, 1961 or Rules made there under and the amount paid to them.

The Contractor shall pay to labour employed by him on or before 7th of every month wages not less than fair wages as defined in the Contractor's Labour Regulations, in the presence of the authorized personnel of BHEL, without linking the same to clearing of bills by BHEL.

The Contractor shall in respect of labour employed by him comply with or cause to be complied with contractor's labour Regulations in regard to all matters provided therein.

The Contractor shall comply with the provisions of all the applicable laws, Central or State and in particular Factories Act 1948, Child Labour Prohibition Act 1986, Employer's Liability Act, 1938, Industrial Disputes Act 1947, Minimum Wages Act 1948, Payment of Wages Act 1936, Employee's Compensation Act 1923, Payment of Gratuity Act 1972, the Contract Labour [Regulation & Abolition] Act 1970, Payment of Bonus Act 1965, Income Tax Act 1961, Maternity Benefit Act 1961, Service Tax Rules & other Acts -Central or State and Rules, Regulations and Notifications by the concerned authorities thereto and amendments made thereunder from time to time along with other statutory obligations and relevant labour laws that may be applicable to him in relation to employment of his employees, payments etc.

The Contractor shall be liable to pay his contribution and the employees' contribution of the State Insurance Scheme in respect of all labour employed by him for the execution of the contract, in accordance with the provision of "The Employees, State Insurance Act, 1948," as amended from time to time. The



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Contractor shall apply to the ESI Authorities, get himself registered with them and obtain a code Number. He shall pay the remittances towards PF under his Code Number only.

The Engineer-in-charge shall on a report having been made by an Inspecting Officer as defined in the Contractor's Labor Regulations have the power to require 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 for wages or of deductions made from his or their wages which are not justified by the terms of the Contract of non-observance of the said Contractor's Labour Regulations

The liability for any compensation on account of injury sustained by an Employee of the contractor will be exclusively that of the contractor, and there should not be any liability on this account to BHEL.

The Officer-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.

The Contractor shall be liable to pay all and any sum or sums that may become payable as contribution, compensation, penalty, fine or otherwise, under the provisions of law wherever applicable to or on behalf of any workmen employed by the contractor as may be demanded by any authority empowered under any of the above 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 deducted by the management of BHEL from any money due or accruing to the contractor.

If so applicable, 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.

The Contractor shall also comply with the provisions of Employees' Provident Fund and Miscellaneous Provisions Act 1952 and Rules, Regulations and other Orders issued thereunder. The Contractor, as the employer, shall be liable to pay Employer contribution together with the Employee contribution (collected through deductions from monthly wages) towards PF in accordance with the provisions of the Employees' Provident Fund and Miscellaneous Provisions Act, 1952, as amended from time to time, as an independent employer, in respect of all Security personnel deployed by him for the execution of this contract. He shall pay the remittances towards PF under his code Number only.



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The contractor should obtain PF Registration if he has not obtained the same at the time of submitting the bid. He shall pay the remittances under his Code Number only.

The Contractor shall submit a copy of the PF contribution remittance challans and ECR copy bearing individual contribution details every month in respect of the personnel deployed by him at shed, along with bill of the subsequent month. The above documents are necessary for processing monthly bill.

The Contractor shall furnish to BHEL, copies of PF Returns as are due to be submitted to Authorities under the Act, for the entire contract period.

The Contractor shall be liable to pay Employer contribution and the Employee contribution of the Employees State Insurance Scheme in respect of employees employed by him, wherever applicable, as an independent employer for the execution of the contract, in accordance with the provisions of "The Employees State Insurance Act 1948," as amended from time to time.

If the Contractor has not obtained ESI registration at the time of submitting the bid, he shall apply to the ESI authorities, get himself registered and obtain a Code Number. He shall pay the remittances under his Code Number only.

The Contractor shall submit a copy of the ESI contribution remittance. The Contractor shall produce necessary records, documents, and explanation whenever he is called upon to, by any Government Agencies like ESI, PF, Tax authorities, Vigilance etc. or by BHEL for whatsoever reasons.

The Contractor shall indemnify the BHEL against any payment to be made under and for observance of the Regulations aforesaid without prejudice to his right to claim indemnity from these sub-contractors.

In the event of the Contractor committing a default or breach of any of the provisions of the aforesaid Labour Regulations, as amended from time to time or furnishing any information or submitting or filling any form/Register/Slip under the provisions of these Regulations which is materially incorrect, then on the report of the Inspecting Officers as defined in the concerned labour statutes, the Contractor shall without prejudice to any other liability pay to the BHEL a sum not exceeding Rs.50/- as liquidated damages for every default or breach or for furnishing, making, submitting, filling materially incorrect statement, as may be fixed by the identified BHEL personnel. The Contractor shall defend any case by himself, if any action is brought in by such Government Agencies for non-compliance of any Labour Regulations and/or reimburse the expenses incurred by BHEL in this regard.

The Engineer-in-charge shall deduct such amount from bills or security deposit of the Contractor and credit the same to the welfare fund constituted under Regulations. The decisions of the Engineer-in-charge in this respect shall be final and binding.



MODEL RULES FOR LABOUR WELFARE

The Contractor shall at his own expense comply with or cause to be complied with model Rules for labor Welfare as appended to these conditions or rules framed by Government from time to time for the protection of health and for making sanitary arrangements for workers employed directly or indirectly on the works. In case the Contractor fails to make arrangements as aforesaid the Engineer-in-charge shall be entitled do so and recover the cost thereof from the contractor.



ANNEXURE-D

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, equipments 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



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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 safely 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



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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.



ANNEXURE–E

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.



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**Electronic Funds Transfer (EFT) OR
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)	

- A** 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.
- B** 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.
- C** This authority remains in full force until BHEL, EDN, Bangalore receives written notification requesting a change or cancellation.
- D** 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:

Bharath 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



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Electronics Division, Mysore Road, Bangalore – 560 026.

Annexure - I

Certificate by Chartered Accountant on letter head

This is to Certify that M/S
(hereinafter referred to as 'company') having its registered office at
is registered under MSMED Act 2006, (Entrepreneur
Memorandum No (Part-II) dtd:.....
Category: (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the
latest audited financial year as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost
excluding land and building and the items specified by the Ministry of Small Scale Industries vide its
notification No.S.O.1722(E) dated October 5, 2006 :
Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and
furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED
Act, 2006:
Rs.....Lacs

(Strike off whichever is not applicable)

The above investment of Rs.....Lacs is within permissible limit of
Rs.....Lacs forMicro / Small (Strike off which is not applicable)
Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/ Small) (Strike off which is not
applicable) and the date of graduation of such enterprise from its original category is
(dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such
enterprise from its original category as notified vide S.O. No. 3322(E) dated 01.11.2013 published
in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant



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 Regulations**
- ★ **Setting objectives and targets to eliminate / control / minimize 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 amongst employees, customers, suppliers, contractors by pro-active 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.**

Sd.

EXECUTIVE DIRECTOR
BHEL (EDN) BANGALORE



II .Price Bid

PES/AMC/2017

AMC for BHEL EDN make Propulsion System - Lallaguda

Sl. No.	DESCRIPTION OF THE	RATE Inclusive of all taxes & duties except service tax (per year rate)	RATE service tax	TOTAL AMOUNT for one year	TOTAL AMOUNT for two years
01	One set of resources with office and tools required for maintenance of loco as per the section 4 of "Notice Inviting Tenders"				
TOTAL AMOUNT (IN FIGURES) Please mention tax breakup clearly					

TOTAL AMOUNT FOR TWO YEARS (IN WORDS)

Note:

- 1) Evaluation is based on total cost to BHEL
- 2) Invoice to be provided for tax amount claimed



II .Price Bid

PES/AMC/2017

AMC for BHEL EDN make Propulsion System - Tughlakabad

Sl. No.	DESCRIPTION OF THE	RATE Inclusive of all taxes & duties except service tax (per year rate)	RATE service tax	TOTAL AMOUNT for one year	TOTAL AMOUNT for two years
01	One set of resources with office and tools required for maintenance of loco as per the section 4 of "Notice Inviting Tenders"				
TOTAL AMOUNT (IN FIGURES) Please mention tax breakup clearly					

TOTAL AMOUNT FOR TWO YEARS (IN WORDS)

Note:

- 1) Evaluation is based on total cost to BHEL
- 2) Invoice to be provided for tax amount claimed