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

Tender Document for Walkie Talkie System for Yadadri 5X800MW

TENDER REFERENCE DOC	NKR0000316
TENDER DOCUMENT AVAILABLE FROM	Refer E-Procurement System
LAST DATE AND TIME FOR SUBMISSION OF TENDER	Refer E-Procurement System
DATE AND TIME FOR TENDER OPENING	Refer E-Procurement System
SUBMISSION OF TENDER	Bidder to submit offer in E-procurement website : https://bhel.abcprocure.com

This Tender Document Contains documents as per below index:

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REQUEST FOR QUOTATION

BHARAT HEAVY ELECTRICALS LIMITED
Electronics Division
PB No. 2606, Mysore Road Bangalore - 560026
INDIA

RFQ NUMBER: NKR0000316
RFQ DATE: Refer E-Procurement System
RFQ DUE DATE: Refer E-Procurement System

(for all correspondence)
Purchase Executive : Nilmani Kumar
Phone :080- 26998663
Fax : 00918026989227
E-mail: nilmanikumar@bhel.in

Sl No.	Material Code	Description	Qty	Unit
1	PR0900005785	Wireless radio communication system as per attached technical specification The system should facilitate radio communication (walkie talkie) for the plant	1	Set

i). This is only RFQ not an order.
ii). In all correspondence quote RFQ No. & due date.
iii). Quotation should remain valid for a minimum peiod of 90 days from due date.

ಭಾರತ್ ಹೆವಿ ಎಲೆಕ್ಟ್ರಿಕಲ್ಸ್ ಲಿಮಿಟೆಡ್
भारत हेवी इलेक्ट्रिकल्स लिमिटेड
Bharat Heavy Electricals Ltd.,
(A Government of India undertaking)
Electronics Division
PB 2606 , Mysore Road Bangalore , 560026 INDIA

CE: PR: 002- Rev 01

GENERAL COMMERCIAL CONDITIONS FOR CONTRACT

These 'General Commercial Conditions for Contract for Purchase' herein after referred to as GCC apply to all enquiries, tenders, requests for quotations, orders, contracts and agreements concerning the supply of goods and the rendering of related services (hereinafter referred to as "deliveries") to Bharat Heavy Electricals Limited and any of its units, regions or divisions (hereinafter referred to as "BHEL" or the Purchaser) or its projects/ customers.

Any deviations from or additions to these GCC require BHEL's express written consent. The general terms of business or sale of the vendor shall not apply to BHEL. Acceptance, receipt of shipments or services or effecting payment shall not mean that the general terms of business or sale of the vendor have been accepted.

Orders, agreements and amendments thereto shall be binding if made or confirmed by BHEL in writing. Only the Purchasing department of BHEL is authorized to issue the Purchase Order or any amendment thereof.

Definitions: Throughout these conditions and in the specifications, the following terms shall have the meanings assigned to them, unless the subject matter or the context requires otherwise.

a) 'The Purchaser' means Bharat Heavy Electricals Limited, Electronics division, Mysore road, Bangalore 560 026, a Unit of Bharat Heavy Electricals Limited (A Govt. of India Undertaking) incorporated under the Companies Act having its registered office at BHEL House, Siri Fort, New Delhi-110049, India and shall be deemed to include its successors and assigns. It may also be referred to as BHEL.
b) 'The vendor' means the person, firm, company or organization on whom the Purchase Order is placed and shall be deemed to include the vendor's successors, representative heirs, executors and administrator as the case may be. It may also be referred to as Seller, Contractor or Supplier.
c) 'Contract' shall mean and include the Purchase Order incorporating various agreements, viz. tender/ RFQ, offer, letter of intent/acceptance/ award, the General Conditions of Contract and Special Conditions of Contract for Purchase, Specifications, Inspection/ Quality Plan, Schedule of Prices and Quantities, Drawings, if any enclosed or to be provided by BHEL or his authorized nominee and the samples or patterns if any to be provided under the provisions of the contract.
d) 'Parties to the Contract' shall mean the 'The Vendor' and the Purchaser as named in the main body of the Purchase Order.

Order of Precedence:

In case of any inconsistency or contradiction between any of the documents, the order of precedence shall be Purchase Order, LOI / LOA, Special Conditions of Contract and General Conditions of Contract for commercial conditions; and specific agreement on technical conditions, RFQ/offer and specification for Technical Conditions.

Interpretation:

In the contract, except where the context requires otherwise:

a) words indicating one gender include all genders;
b) words indicating the singular also include the plural and words indicating the plural also include the singular;

c) provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing, and
d) "Written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record.

Applicable Conditions:

1. Price Basis: All prices shall be firm until the purchase order is executed / completed in all respects. No price variations / escalation shall be permitted.

2. Ordering and confirmation of Order:Vendor shall send the order acceptance on their company letter head/ through e-mail within a week from the date of receipt of Purchase Order or such other period as specified/ agreed by BHEL. BHEL reserves the right to revoke the order placed if the order confirmation differs from the original order placed. The acceptance of goods/services/supplies by BHEL as well as payments made in this regard shall not imply acceptance of any deviations.
   The purchase order will be deemed to have been accepted if no communication to the contrary is received within one week (or the time limit as specified/agreed by BHEL) from the date of receipt of the purchase order.

3. Documentation:After receipt of Purchase Order, vendor should submit necessary documents(if & as applicable) like drawings specified, bill of materials, datasheets, catalogues, quality plan, test procedure, type test report , O & M Manuals and/or any other relevant documents as per Specification/Purchase Order, as and when required by BHEL/Customer.
   At any stage within the contract period, the vendor shall notify of any error, fault or other defect found in BHEL's documents /specifications or any other items for reference. If and to the extent that (taking account of cost and time) any vendor exercising due care would have discovered the error, fault or other defect when examining the documents/specifications before submitting the tender, the time for completion shall not be extended. However if errors, omissions, ambiguities, inconsistencies, inadequacies or other defects are found in the vendor's documents, they shall be corrected at his cost, notwithstanding any consent or approval.

4. Penalty:
   a. For delay in documentation: In the event of delay in submission of complete set of specified documents ((like drawings, bill of materials, datasheets, catalogues, quality plan etc. as called in tender specifications including soft copies wherever applicable) in required sets beyond two(02) weeks (or as agreed/indicated in the SCC/Purchase Order) from the date of receipt of Purchase Order(by email), penalty at 0.5% (half percent) per week or part thereof, limited to a maximum of 5% (five percent) of the basic material value of the Purchase Order will be applicable.

      Penalty for delayed documentation if applicable, shall be deducted at the time of first supply payment. If penalty is applicable for duration of less than a week, penalty @ 0.5% (half percent) of the basic material value will be deducted. GST as applicable will be recovered along with penalty amount.

   b. For delay in delivery: In the event of delay in agreed contractual delivery as per Purchase Order, penalty @ 0.5 % (half percent) per week or part thereof but limited to a max of 10% (ten percent) value of undelivered portion (basic material cost) will be applicable. Delivery will commence from the date of issue of Manufacturing clearance along with approved document. The date for which Inspection call is issued by vendor along with test certificates / test reports /Certificate of Conformance / calibration reports, as proof of completion of manufacturing will be treated as date of deemed delivery for penalty calculation. In the absence of furnishing such document indicated above as proof of completion of manufacturing along with inspection call, actual date of inspection will be considered as date of deemed delivery and BHEL will not be responsible for delay in actual date of inspection.

Penalty for delayed delivery if applicable, shall be deducted at the time of first supply payment. If penalty is applicable for duration of less than a week, penalty @ 0.5% (half percent) of the basic material value will be deducted. GST as applicable will be recovered along with penalty amount.

5. Contract variations (Increase or decrease in the scope of supply): BHEL may vary the contracted scope as per requirements at site. If vendor is of the opinion that the variation has an effect on the agreed price or delivery period, BHEL shall be informed of this immediately in writing along with technical details. Where unit rates are available in the Contract, the same shall be the basis for such additional work. Vendor shall not perform additional work before BHEL has issued written instructions/ amendment to the Purchase Order to that effect. The work which the vendor should have or could have anticipated in terms of delivering the service(s) and functionality (i.e.) as described in this agreement, or which is considered to be the result of an attributable error on the vendor's part, shall not be considered additional work.

6. Inspection: Prior written notice of at least 10 days shall be given along with internal test certificates/COC and applicable test certificates. Materials will be inspected by BHEL-EDN-QS/CQS or BHEL nominated Third Party Inspection Agency (TPIA) or BHEL authorized Inspection Agency or Customer / Consultant or jointly by BHEL & Customer / consultant. All tests have to be conducted as applicable in line with approved Quality plan or QA Checklist or Purchase specification and original reports shall be furnished to BHEL-EDN, Bangalore for verification/acceptance for issue of dispatch clearance.
   All costs related to inspections & re-inspections shall be borne by vendor. Whether the Contract provides for tests on the premises of the vendor or any of his Sub-contractor/s, vendor shall be responsible to provide such assistance, labour, materials, electricity, fuels, stores, apparatus, instruments as may be required and as may be reasonably demanded to carry out such tests efficiently. Cost of any type test or such other special tests shall be borne by BHEL only if specifically agreed to in the purchase order.

7. Transit Insurance: Transit insurance coverage between vendor's works and project site shall be to the account of BHEL, unless specifically agreed otherwise. However, vendor shall send intimation directly to insurance agency (as mentioned in dispatch instructions issued by BHEL) through fax/courier/e-mail, immediately on dispatch of goods for covering insurance. A copy of such intimation sent by vendor to insurance agency shall be given to BHEL along with dispatch documents. Dispatch documents will be treated as incomplete without such intimation copy. BHEL shall not be responsible for sending intimations to insurance agency on behalf of the vendor.

8. Mode of dispatch:
   Indigenous Scope: By road on Door Delivery Consignee Copy attached basis through your approved transporter (unless otherwise indicated in Dispatch Instructions), only on receipt of Despatch Clearance from BHEL.
   Imported Scope: By Air/Sea through BHEL approved Freight Forwarder/supplier approved Consolidator respectively as per agreed contractual terms, only on receipt of Dispatch Clearance from BHEL.

9. Changes in Statutory levies:
   If any rates of Tax are increased or decreased, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the execution of Contract, which was or will be assessed on the bidder in connection with performance of the Contract, an equitable adjustment of the Contract Price shall be made to fully take into account any such change by addition to the Contract Price or deduction there from, as the case may be. However, these adjustments would be restricted to direct transactions between BHEL and the bidder /agent of foreign bidder (if applicable). These adjustments shall not be applicable on procurement of raw materials, intermediary components etc. by the bidder /agent.

10. Availing duty/tax exemption benefits by bidder, wherever applicable: BHEL shall issue the required Certificate/s, as per relevant policies of the Govt. of India, to facilitate the bidders to avail any such benefits under the Contract. In case of failure of the bidders to receive the benefits partly or fully from the Govt. of India and/or in case of any delay in receipt of such benefits, BHEL shall neither be liable nor responsible in any manner whatsoever.

11. Taxes against sub-vendor dispatches: All taxes/levies, as applicable in respect of all components, equipments and material to be despatched directly from the sub-vendor's works to Site irrespective of the fact whether such taxes and levies are assessable and chargeable on Vendor or the BHEL, shall be to the vendor's account and no separate claim in this regard will be entertained by BHEL.

12. High Sea Sales (HSS): Customs clearance of the consignment landed on Indian Sea/Air ports will be done by BHEL based on the original HSS documents provided by vendors.
    Any delay in submission of complete/correct HSS documents to BHEL may incur demurrage charges. All demurrage charges on account of incomplete /incorrect HSS documents submission by vendor will be to vendor's account and all such charges will be recovered from any of the available vendor bills with BHEL.

13. Packaging and dispatch:The Seller shall package the goods safely and carefully and pack them suitably in all respects considering the peculiarity of the material for normal safe transport by Sea/ Air / Rail/ Road to its destination suitably protected against loss, damage, corrosion in transit and the effect of tropical salt laden atmosphere. The packages shall be provided with fixtures/ hooks and sling marks as may be required for easy and safe handling. If any consignment needs special handling instruction, the same shall be clearly marked with standard symbols / instructions. Hazardous material should be notified as such and their packing, transportation and other protection must conform to relevant regulations.
    The packing, shipping, storage and processing of the goods must comply with the prevailing legislation and regulations concerning safety, the environment and working conditions. Any Imported/Physical Exports items packed with raw/ solid wood packing material should be treated as per ISPM – 15 (fumigation) and accompanied by Phytosanitory/ Fumigation certificate. If safety information sheets (MSDS – Material Safety Data Sheet) exist for an item or the packaging, vendor must provide this information without fail along with the consignment.
    Each package must be marked with Consignee name, Purchase order number, Package number, Gross weight and net weight, dimensions (LxBxH) and Seller's name. Packing list of goods inside each package with PO item number and quantity must also be fixed securely outside the box to indicate the contents of each box. Total number of packages in the consignment must also be indicated in the packing list.
    Separate packing & identification of items should be as follows.
    1. Main Scope - All items must be tagged with part no. & item description.
    2. Commissioning accessories/spares - All items must be tagged with part no. & item description.
    3. Mandatory spares - All items must be tagged with part no. & item description.
    Nevertheless, vendor shall adhere to dispatch & packing instructions issued by BHEL at the time of dispatch.

14. Assignment of Rights & Obligations; Subcontracting: Vendor is not permitted to subcontract the delivery or any part thereof to third party or to assign the rights and obligations resulting from this agreement in whole or in part to third parties without prior written permission from BHEL. Any permission or approval given by the BHEL shall, however, not absolve the vendor of the responsibility of his obligations under the Contract.

15. Progress report: Vendor shall render such report as to the progress of work and in such form as may be called for by the concerned purchase officer from time to time. The submission and acceptance of such reports shall not prejudice the rights of BHEL in any manner.

16. Non-disclosure and Information Obligations: Vendor shall provide with all necessary information pertaining to the goods as it could be of importance to BHEL. Vendor shall not reveal any specified confidential information that may be divulged by BHEL to Vendor's employees not involved with the tender/ contract & its execution and delivery or to third parties, unless BHEL has agreed to this in writing beforehand. Vendor shall not be entitled to use the BHEL name in advertisements and other commercial publications without prior written permission from BHEL.

17. Cancellation /Termination of contract: BHEL shall have the right to completely or partially terminate the agreement by means of written notice to that effect. Termination of the Contract, for whatever reason, shall be without prejudice to the rights of the parties accrued under the Contract up to the time of termination.
    BHEL shall have the right to cancel/foreclose the Order/ Contract, wholly or in part, in case it is constrained to do so on account of any decline, diminution, curtailment or stoppage of the business.

18. Risk Purchase Clause: In case of failure of supplier, BHEL at its discretion may make purchase of the materials / services not supplied / rendered in time at the RISK & COST of the supplier. Under such situation, the supplier who fails to supply the goods in time shall be wholly liable to make good to BHEL any loss due to risk purchase.
    In case of items demanding services at site like erection and commissioning, vendor should send his servicemen/representatives within 7 days from the service call. In case a vendor fails to attend to the service call, BHEL at its discretion may also make arrangements to attend such service by other parties at the **RISK & COST** of the supplier. Under such situation the supplier who fails to attend the service shall be wholly liable to make good to BHEL any loss due to risk purchase/service including additional handling charges due to the change.

19. Shortages: In the event of shortage on receipt of goods and/or on opening of packages at site, all such shortages, caused by supplier's act or omission, shall be made good at free of cost within a reasonable time that BHEL may allow from such intimation.
    Transit Damages: In the event of receipt of goods in damaged condition or having found them so upon opening of packages at site, supplier shall make good of all such damages within a reasonable time from such intimation by BHEL. In case BHEL raises an insurance claim, the cost of material limited to insurance settled amount less handling charges will be reimbursed to supplier.

20. Remedial work: Notwithstanding any previous test or certification, BHEL may instruct the vendor to remove and replace materials/goods or remove and re-execute works/services which are not in accordance with the purchase order. Similarly BHEL may ask the vendor to supply materials or to execute any services which are urgently required for any safety reasons, whether arising out of or because of an accident, unforeseeable event or otherwise. In such an event, Vendor shall provide such services within a reasonable time as specified by BHEL.

21. Indemnity Clause: Vendor shall comply with all applicable safety regulations and take care for the safety of all persons involved. Vendor is fully responsible for the safety of its personnel or that of his subcontractor's men / property, during execution of the Purchase Order and related services. All statutory payments including PF, ESI or other related charges have to be borne by the vendor. Vendor is fully responsible for ensuring that all legal compliances are followed in course of such employment.

22. Product Information, Drawings and Documents: All specified drawings, technical documents or other technical information received by Vendor from BHEL or vice versa shall not, without the consent of the other party, be used for any other purpose than that for which they were provided. They may not, without the consent of the Disclosing party, otherwise be used or copied, reproduced, transmitted or communicated to third parties. All information and data contained in general product documentation, whether in electronic or any other form, are binding only to the extent that they are by reference expressly included in the contract.
    Vendor, as per agreed date/s but not later than the date of delivery, provide free of charge information and drawings which are necessary to permit and enable BHEL to erect, commission, operate and maintain the product. Such information and drawings shall be supplied in as many numbers of copies as may be agreed upon.
    All intellectual properties, including designs, drawings and product information etc. exchanged during the formation and execution of the Contract shall continue to be the property of the disclosing party.

23. Intellectual Property Rights, Licenses: If any Patent, design, Trade mark or any other intellectual property rights apply to the delivery (goods/related service) or accompanying documentation shall be the exclusive property of the Vendor and BHEL shall be entitled to the legal use thereof free of charge by means of a non-exclusive, worldwide, perpetual license. All intellectual property rights that arise during the execution of the Purchase Order/ contract for delivery by vendor and/or by its employees or third parties involved by the vendor for performance of the agreement shall belong to BHEL. Vendor shall perform everything necessary to obtain or establish the above mentioned rights. The Vendor guarantees that the delivery does not infringe on any of the intellectual property rights of third parties. The Vendor shall do everything necessary to obtain or establish the alternate acceptable arrangement pending resolution of any (alleged)

claims by third parties. The Vendor shall indemnify BHEL against any (alleged) claims by third parties in this regard and shall reimburse BHEL for any damages suffered as a result thereof.

24. Force Majeure: Notwithstanding anything contained in the purchase order or any other document relevant thereto, neither party shall be liable for any failure or delay in performance to the extent said failures or delays are caused by the "Act of God" and occurring without its fault or negligence, provided that, force majeure will apply only if the failure to perform could not be avoided by the exercise of due care and vendor doing everything reasonably possible to resume its performance.
    A party affected by an event of force majeure which may include fire, tempest, floods, earthquake, riot, war, damage by aircraft etc., shall give the other party written notice, with full details as soon as possible and in any event not later than seven (7) calendar days of the occurrence of the cause relied upon. If force majeure applies, dates by which performance obligations are scheduled to be met will be extended for a period of time equal to the time lost due to any delay so caused.

    Notwithstanding above provisions, in an event of Force Majeure, BHEL reserves for itself the right to cancel the order/ contract, wholly or partly, in order to meet the overall project schedule and make alternative arrangements for completion of deliveries and other schedules.

25. Warranty:
    Wherever required, and so provided in the specifications/ Purchaser Order, the Seller shall ensure that the goods supplied shall comply with the specifications laid down, for materials, workmanship and performance.
    Unless otherwise specified in SCC, warranty period shall be applicable for a period of 24 months from the date of delivery of goods or 18 months from the date of commissioning of goods, whichever is earlier.
    The warranty period as described above shall apply afresh to replaced, repaired or re-executed parts of a delivery. Unless otherwise specifically provided in the Purchase Order, Vendor's liability shall be co terminus with the expiration of the applicable warranty period.

26. Limitation of Liability: Vendor's liability towards this contract is limited to a maximum of 100% of the contract value and consequential damages are excluded. However the limits of liability will have no effect in cases of criminal negligence or wilful misconduct.
    The total liability of Vendor for all claims arising out of or relating to the performance or breach of the Contract or use of any Products or Services or any order shall not exceed the total Contract price.

27. Liability during warranty: Vendor shall arrange replacement / repair of all the defective materials / services under its obligation during the warranty period. The rejected goods shall be taken away by vendor and replaced / repaired. In the event of the vendor's failure to comply, BHEL may take appropriate action including disposal of rejections and replenishment by any other sources at the cost and risk of the vendor.
    In case, defects attributable to vendor are detected during Warranty period or where the commissioning call is issued within the warranty period, vendor shall be responsible for replacement/ repair of the goods as required by BHEL at vendor's cost even after expiry of warranty period.
    Further if the equipment or any part thereof cannot be used by reason of such defect and/or making good of such defect, the warranty period of the equipment or such part, as the case may be, shall be extended by a period equal to the period during which the equipment or such part cannot be used by BHEL because of any of the aforesaid reasons. Upon correction of the defects in the facilities or any part thereof by repair/replacement, such repair/replacement shall have the warranty period for a period of twelve (12) months from the time such replacement/repair of the equipment or any part thereof has been completed.

28. Liability after warranty period: At the end of the warranty, the Vendor's liability ceases except for latent defects. For the purpose of this clause, latent defects shall be the defects inherently lying within the material or arising out of design deficiency which do not manifest themselves during the warranty Period, but later. The Contractor's liability for latent defects warranty for the equipment including spares shall be limited to a period of six months from the end of the warranty period of the respective equipment including spares or first time commissioning, whichever is later but not later than one (01) year from the date of expiry of warranty period.

29. Compliance with Laws: Vendor shall, in performing the contract, comply with all applicable laws. The vendor shall make all remittances, give all notices, pay all taxes, duties and fees, and obtain all permits, licences and approvals, as required by the laws in relation to the execution and completion of the contract and for remedying of any defects; and the Contractor shall indemnify and hold BHEL harmless against and from the consequences of any failure to do so.

30. Settlement of Disputes:Except as otherwise specifically provided in the Purchase Order, decision of BHEL shall be binding on the vendor with respect to all questions relating to the interpretation or meaning of the terms and conditions and instructions herein before mentioned and as to the completion of supplies/work/services, other questions, claim, right, matter or things whatsoever in any way arising out of or relating to the contract, instructions, orders or these conditions or otherwise concerning the supply or the execution or failure to execute the order, whether arising during the schedule of supply/work or after the completion or abandonment thereof. Any disputes or differences among the parties shall to the extent possible be settled amicably between the parties thereto, failing which the disputed issues shall be settled through arbitration. Vendor shall continue to perform the contract, pending settlement of dispute(s).

31. Arbitration Clause in case of Contract with vendors other than Public Sector Enterprise (PSE) or a Government Department:

    ARBITRATION & CONCILIATION

    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.
    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 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.

    Arbitration Clause in case of Contract with a Public Sector Enterprise (PSE) or a Government Department:

    In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred by either party for Arbitration to the Sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any Party aggrieved by such Award may make further reference for setting aside or revision of the Award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the Parties hereto finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.'

32. Applicable Laws and Jurisdiction of Courts: Prevailing Indian laws both substantive and procedural, including modifications thereto, shall govern the Contract. Subject to the conditions as aforesaid, the competent courts in Bangalore alone shall have jurisdiction to consider over any matters touching upon this contract.

33. General Terms: That any 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.
    That the headings used in this agreement are for convenience of reference only.
    That all notices etc., to be given under the Purchase order shall be in writing, type script or printed and if sent by registered post or by courier service to the address given in this document shall be deemed to have been served on the date when in the ordinary course, they would have been delivered to the addressee.

ಭಾರತ್ ಹೆವಿ ಎಲೆಕ್ಟ್ರಿಕಲ್ಸ್ ಲಿಮಿಟೆಡ್
भारत हेवी इलेक्ट्रिकल्स लिमिटेड
Bharat Heavy Electricals Ltd.,
(A Government of India undertaking)
Electronics Division
PB 2606 , Mysore Road Bangalore , 560026 INDIA

CE:PR:001- Rev 02

INSTRUCTIONS TO BIDDERS

Bidder is requested to read the instructions carefully and submit their quotation taking into consideration of all the points:

A. GENERAL INSTRUCTIONS:

1. Any Purchase Order resulting from this enquiry shall be governed by the Instructions to Bidders (document reference: CE: PR: 001 – Rev 02), General Conditions of Contract (document reference: CE: PR: 002 - Rev 01) and Special Conditions of Contract, if any, of the enquiry.
2. Any deviations from or additions to the "General Conditions of Contract"or "Special Conditions of Contract" require BHEL's express written consent. The general terms of business or sale of the bidder shall not apply to this tender.
3. Regret letter (either through post or by mail or by EPS) indicating reasons for not quoting must be submitted without fail, in case of non-participation in this tender. Supplier shall be liable for removal as a registered vendor of BHEL when the supplier fails to quote against four consecutive tender enquiries for the same item or all enquiries in last two years for the same item, whichever is earlier.
4. Procurement directly from the manufacturers is preferred. However, if the OEM/ Principal insist on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer/ supplier could bid directly but not both. Agent/Representative authorized by the OEM/Principal in turn cannot further sub authorize any other firm for submitting the offer or for placement of order.

   In case bids are received from the manufacturer/ supplier and his agent, bid received from the agent shall be ignored.
5. Consultant / firm (and any of its affiliates) shall not be eligible to participate in the tender/s for the related goods for the same project if they were engaged for consultancy services for the same project.
6. If an Indian representative/associate/liaison office quotes on behalf of a foreign based bidder, such representative shall furnish the following documents:
   a. Authorization letter to quote and negotiate on behalf of such foreign-based bidder.
   b. Undertaking from such foreign based bidder that such contract will be honored and executed according to agreed scope of supply and commercial terms and conditions.
   c. Undertaking shall be furnished by the Indian representative stating that the co-ordination and smooth execution of the contract and settlement of shortages/damages/replacement/repair of imported scope till the equipment is commissioned and handed over to customer will be the sole responsibility of the Indian representative/associates/agent/liaison office.
   d. Refer **Annexure I** on "Guidelines for Indian Agents".
7. In case of imported scope of supply, customs clearance & customs duty payment will be to BHEL account after the consignment is received at Indian Airport /Seaport.Bidders must provide all original documents required

for completing the customs clearance along with the shipment. Warehousing charges due to incomplete or missing documentation will be to supplier's account. All offers for imported scope of supply by air, must be made from any of the gateway ports (within the country) indicated **(Refer Annexure II).**

8. The offers of the bidders who are on the banned list and also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of the banned firms is available on BHEL website: http://www.bhel.com/vender_registration/vender.php
9. Business dealings with bidders will be suspended if they are found to have indulged in any malpractices/misconduct which are contrary to business ethics like bribery, corruption, fraud, pilferage, cartel formation, submission of fake/false/forged documents, certificates, information to BHEL or if they tamper with tendering procedure affecting the ordering process or fail to execute a contract, or rejection of 3 consecutive supplies or if their firms / works are under strike/lockout for a long period.Bidder may refer "Guidelines for Suspension of Business Dealings with Suppliers/ Contractors" available on www.bhel.com for more details.
10. 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 your notice.

11. For this procurement, Public procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO against this NIT.

    In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/or local content in respect of this procurement, same shall be applicable.

B. <u>GUIDELINES FOR PREPARATION OF OFFER:</u>

1. Quotation shall be submitted in Single Part Bid, Two Part Bid or Three Part Bid, as called for in the tender:

   - **SINGLE PART BID**: Technical and Commercial Bid with prices along with price summary & filled in BHEL Standard Commercial terms and conditions in a single sealed envelope.

   - **TWO PART BID**: Unpriced offer i.e. "Techno-commercial Bid" with filled in BHEL Standard Commercial terms and conditions in a sealed envelope **along with the copy of the "Price Bid"without the prices** should be enclosed in one cover and the cover must be super scribed **"Techno-commercial offer)** and Priced offer i.e. "Price Bid"containing price summary in a separate sealed envelope and must be super scribed **"Price Bid"**.Both these envelopes shall be enclosed in a single sealed envelope superscribed with enquiry number, due date of tender and any other details as called for in the tender document.

   - **THREE PART BID**: Pre-qualification Bid (Part-I), Techno Commercial Bid with filled in BHEL Standard Commercial terms and conditions (Part-II), and Price Bid (Part-III). All three envelopes shall be enclosed in a single sealed envelope superscribed with enquiry number, due date of tender and any other details as called for in the tender document.

   If any of the offers (Part I, Part II or Part III) are not submitted before the due date and time of submission (or) if any part of the offer is incomplete, the entire offer of the bidder is liable for rejection.

2. Supplier shall ensure to superscribe each envelope with RFQ number, RFQ Date, RFQ Due date and time, Item Description and Project clearly & boldly. Also mention on the envelope whether it is "Techno Commercial Bid" or "Price Bid" or "Pre-Qualification Bid". Please ensure complete address, department name and purchase executive name is mentioned on the envelope (before dropping in the tender box or handing over) so that the

tender is available in time for bid opening.

3. BHEL standard Commercial Terms and Conditions (duly filled, signed & stamped) must accompany Technical-Commercial offer without fail and should be submitted in original only.

   The above indicated submission of Offers in "sealed envelope/hard copy" as mentioned in points B.1-B.3 is applicable for tenders that are not floated through E-Procurement System (EPS).

4. Validity: Unless otherwise specified in SCC (special commercial conditions of contract), the offer will be valid for a period of 90 days from the date of part-I bid opening and in case of Negotiation/Counter-offer/Reverse Auction, price validity will apply afresh for a period of _60_ days from the date of according final price by bidder (or) upto original validity period, whichever is later.

5. Any of the terms and conditions not acceptable to supplier, shall be explicitly mentioned in the Techno-Commercial Bid. If no deviations are brought out in the offer it will be treated as if all terms and conditions of this enquiry are accepted by the supplier without deviation.
6. Deviation to this specification/item description, if any, shall be brought out clearly indicating "DEVIATION TO BHEL SPECIFICATION" without fail, as a part of Techno-Commercial Bid. If no deviations are brought out in the offer it will be treated as if the entire specification of this enquiry is accepted without deviation.
7. Suppliers shall submit one set of original catalogue, datasheets, bill of materials, dimensional drawings, mounting details and/or any other relevant documents called in purchase specification as part of Technical Bid.
8. "Price Bid" shall be complete in all respects containing price break-up of all components along with all applicable taxes and duties, freight charges (if applicable) etc. Once submitted no modification / addition / deletion will be allowed in the "Price Bid." Bidders are advised to thoroughly check the unit price, total price to avoid any discrepancy.
9. In addition, bidder shall also quote for erection & commissioning charges/erection supervision & commissioning charges (E&C service charges) if applicable, documentation charges, testing Charges (type & routine), training charges etc. as applicable along with corresponding tax. The price summary must indicate all the elements clearly.
10. For Physical Export projects or wherever services are rendered by foreign suppliers in India, bidders should indicate "lumpsum" Erection and Commissioning (or) Erection Supervision and Commissioning charges, as applicable (including To & Fro Fare, Boarding, Lodging, Local Conveyance etc.) for carrying out E&C activity and further handing over to customer. The quotation shall clearly indicate scope of work, likely duration of commissioning, pre-commissioning checklist (if any).
11. Wherever bidders require PAC (Project Authority Certificate)/applicable certificates for import of raw materials, components required for DECC,EPCG Power Projects, Export Projects or other similar projects wherein supplies are eligible for customs duty benefits, lists and quantities of such items and their values (CIF) has to be mentioned in the offer. Prices must be quoted taking into account of such benefits.
12. Prices should be indicated in both figures & words**.** Bid should be free from correction/overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection. Any typographical error, totalling mistakes, currency mistake, multiplication mistake, summing mistakes etc. observed in the price bids will be evaluated as per **Annexure III** "Guidelines for dealing with Discrepancy in Words & Figures – quoted in price bid" and BHEL decision will be final.
13. Documents submitted with the offer shall be signed and stamped in each page by authorized representative of the bidder. However, this requirement is not mandatory for offers uploaded through E-Procurement System (EPS).

C. GUIDELINES FOR OFFER SUBMISSION:

The under-mentioned clauses 1, 2&3 will not be applicable for EPS tenders.

1. Offers / Quotations must be dropped in tender box before 13.00 Hrs. on or before due date mentioned in RFQ.The offers are to be dropped in the proper slot of the Tender Box kept in our reception area with caption "CE, SC&PV, DEFENCE". Tenders are opened on 3 days in a week (Monday/Wednesday/Friday). Tender must be deposited in the slot corresponding to the day (Monday - Box no.4/Wednesday - Box no. 6 /Friday - Box no.8) while depositing the offer.

2. E-Mail/ Internet/EDI offers received in time shall be considered only when such offers are complete in all respects. In case of offers received through E-mail, please send the offer to the email ID specified in the SCC document of the tender.

3. Offers of Vendors who already have a valid Technical/Commercial MOU with BHEL-EDN for the items of the RFQ shall mention the relevant MOU reference no. and give only such other details not covered in the MOU.

4. In cases where tender documents are bulky, or due to some reasons tender documents are required to be submitted by hand or through posts/couriers, the offers are to be handed over either of the two purchase officers whose names are mentioned in the SCC document of tender RFQ.
5. Tenders will be opened on due date, time and venue as indicated in the RFQ in the presence of bidders at the venue indicated in the RFQ. For EPS tenders, e-mail notifications will be automatically generated and forwarded to registered e-mail ID/s of bidders during opening of tenders.
6. Bidder will be solely responsible:
   a. For submission of offers before due date and time. Offers submitted after due date and time will be treated as "Late offers" and will be rejected.

   b. For submission of offers in the correct compartment of the tender box based on the day of due date (Monday/Wednesday/Friday). Please check before dropping your offer in the correct tender box.

   c. For depositing offers in proper sealed condition in the tender box. If the bidder drops the tender in the wrong tender box (or) if the tender document is handed over to the wrong person, BHEL will not be responsible for any such delays.

   d. For offers received through email etc., suppliers are fully responsible for lack of secrecy on information and ensuring timely receipt of such offers in the tender box before due date & time (This clause will not be applicable for EPS tenders).

   The above indicated submission of Offers as mentioned in points 6.a-6.d is applicable for tenders that are not floated through EPS.

   e. In case of e-tender, all required documents should be uploaded before due date and time. Availability of power, internet connections, system/software requirements etc. will be the sole responsibility of the bidder. Wherever assistance is needed for submission of e-tenders, help-line numbers as available in the web-site of service provider of BHEL may be contacted.

   Purchase Executive/ BHEL shall not be responsible for any of the activities relating to submission of offer.

D. PROCESSING OF OFFERS RECEIVED:

1. Any discount/ revised offer submitted by the supplier on its own shall be accepted provided it is received on or before the due date and time of offer submission (i.e. Part-I bid). The discount shall be applied on pro-rata basis to all items unless specified otherwise by the bidder.
2. Changes in offers or Revised offers given after Part-I bid opening shall not be considered as a part of the original offer unless such changes/revisions are requested by BHEL. In case of withdrawal of any Technical/Commercial deviation(s) by the bidder before opening of price bids/conducting the Reverse Auction, revision of price/impact bid will not be accepted.
3. In case there is no change in the technical scope and/ or specifications and/ or commercial terms & conditions, the supplier will not be allowed to change any of their bids after Technical bids are opened (after the due date and time of tender opening).
4. In case of changes in scope and/ or technical specifications and/ or commercial terms & conditions by BHEL and it accounts for price implications from bidders, all techno-commercially acceptable bidders shall be asked by BHEL (after freezing the scope, technical specifications and commercial terms & conditions) to submit the impact of such changes on their price bid. Impact price will be applicable only for changes in technical specification / commercial conditions by BHEL. The impact price must be submitted on or before the cut-off date specified by BHEL and the original price bid and the price impact bid will be opened together at the time of price bid opening.
5. BHEL reserves the right to adopt Reverse Auction or standard Price Bid Opening procedure for price evaluation, at its discretion. This shall be decided after completion of techno-commercial evaluation of tender (Refer BHEL website http://www.bhel.com/vender_registration/vender.php for Guidelines of Reverse Auction). In case BHEL does not resort to Reverse Auction, the price bids and price impacts (if any) already submitted and available with BHEL shall be opened as per BHEL's standard practice.
6. Un-opened bids (including price bids) will be returned to the respective bidders after release of Purchase order. Regarding Offers for EPS tenders that get rejected on PQC/ techno-commercial grounds, the bids for the subsequent parts will not be opened i.e., both technical bid and price bid (Parts-II & III)will not be opened in case of rejection on PQC ground and price bid (Part-II/Part-III, as applicable) will not be opened in case of rejection on techno-commercial ground.
7. After receipt of Purchase Order, supplier should submit required documents viz.,specified drawings, bill of materials, datasheets, catalogues, quality plan, test procedure, type test report , O & M Manuals and/or any other relevant documents as per Specification/Purchase Order, as and when required by BHEL/Customer.
8. Any deviation to the terms and conditions not mentioned in the quotation by supplier in response to this enquiry will not be considered, if put forth subsequently or after issue of Purchase Order, unless clarification is sought for by BHEL and agreed upon in the Purchase Order.
9. Evaluation shall be on the basis of delivered cost (i.e. “Total Cost to BHEL").

   “Total Cost to BHEL” shall include total basic cost, packing & forwarding charges, taxes and/or duties(as applicable), freight charges, taxes on Services, customs clearance charges for imported items, any other cost indicated by bidder for execution of the contract and loading factors (for non-compliance to BHEL Standard Commercial Terms & Conditions). Benefits arising out of Nil Import Duty on DEEC, EPCG, DFIA Projects, Physical Exports or such 100% exemptions (statutory benefits), project imports, customer reimbursements of statutory duties (like Basic Customs Duty and cess on customs duty), Input tax credits as applicable will also

be taken into account for arriving at the Total cost to BHEL (wherever applicable and as indicated in SCC document of tender).

For EPS tenders, it shall be noted that the prices (including discounts) vis-a-vis currency quoted in EPS portal only will be considered as Final for the purpose of evaluation of the lowest bidder. Bidder shall ensure to indicate the applicable taxes against each line item in online portal, failing to which the same will be considered as inclusive/NIL.

10. For evaluation of offers in foreign currency, the exchange rate (TT selling rate of SBI) shall be taken as under:

    Single part bids: Date of tender opening

    Two/three part bids: Date of Part-I bid opening

    Reverse Auction: Date of Part-I bid opening

    In case of Performance Bank Guarantee (PBG) also, exchange rate will be considered as mentioned above for converting foreign currency to Indian currency and vice versa.

    If the relevant day happens to be a bank holiday, then the exchange rate as on the previous working day of the bank (SBI) shall be taken.

11. Ranking (L-1, L-2 etc.) shall be done only for the techno-commercially acceptable offers.

E. <u>INFORMATION ON PAYMENT TERMS:</u>

1. All payments will be through Electronic Fund transfer (EFT). Vendor has to furnish necessary details as per BHEL standard format **(Refer Annexure IV)** for receiving all payments through NEFT.(Applicable for Indian vendors only).
2. In case of High Sea Sales transaction, customs clearance of the consignment landed on Indian Sea/Air ports will be done by BHEL based on the original HSS documents provided by vendors. All warehousing charges due to delay in submission of complete and or correct HSS documents to BHEL will be to supplier's account only. Such recovery will be made out of any of the available bills **(Refer Annexure V)**.
3. Statutory deductions, if any, will be made and the deduction certificate shall be issued.
   A. In case vendor does not provide PAN details, the TDS deduction shall be at the maximum percentage stipulated as per the provisions of Income Tax Act.

      In addition to the above, Foreign vendors shall also submit relevant details of their bankers like Swift Code, Banker's Name &Address etc.

   B. TDS deduction as per section 51 of CGST Act,2017 shall be applicable as per Gazette Notification No. 50/2018-Central Tax, Dated: 13th September 2018 and subsequent notification/s, as and when released by Govt. authorities.
4. Incomplete documentation will not be accepted. Delayed submission of invoice / documents may result in corresponding delay in payment. In this connection, request to also refer clause: G about invoicing & payment formalities under GST regime. Applicable documents shall be submitted to the purchaser at the time of execution of supplies/services for availing GST input credits.

F. STANDARD PAYMENT TERMS OF BHEL-EDN:

PURCHASE ORDERS FOR:	**SUPPLY WITH ERECTION & COMMISSIONING**	**SUPPLY WITH ERECTION SUPERVISION & COMMISSIONING**	**SUPPLY ONLY**
INDIGENOUS PROCUREMENT	a. 90% of basic value + 100% of taxes and freight charges will be paid in 45 days from the date of dispatch or 15 days from the date of submission of complete set of documentation, whichever is later. Balance 10% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of E&C. Note: In case PBG is not furnished, only 80% payment will be released against 90% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	b. 95% of the basic value + 100% of taxes and freight charges will be paid in 45 days from the date of dispatch or 15 days from the date of submission of complete set of documentation, whichever is later. Balance 5% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of commissioning. Note: In case PBG is not furnished, only 85% payment will be released against 95% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	c. 100% of PO value with taxes and freight will be paid in 45 days from the date of dispatch or 15 days from the date of submission of complete set of documentation, whichever is later.
IMPORT PROCUREMENT	d. 90% of the basic value will be paid on the 45th day, against usance draft of 45 days, from the date of AWB/BOL on submission of complete set of documents. Balance 10% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of E&C. Note: In case PBG is not furnished, only 80% payment will be released against 90% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	e. 95% of the basic value will be paid on the 45th day, against usance draft of 45 days, from the date of AWB/BOL on submission of complete set of documents. Balance 5% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of commissioning. Note: In case PBG is not furnished, only 85% payment will be released against 95% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	f. 100% of PO value will be paid against usance draft of 45 days from the date of AWB/BOL on submission of complete set of documents.

PURCHASE ORDERS FOR:	**SUPPLY WITH ERECTION & COMMISSIONING**	**SUPPLY WITH ERECTION SUPERVISION & COMMISSIONING**	**SUPPLY ONLY**
HIGH-SEA SALES PROCUREMENT	g. 90% of basic value will be paid in 45 days from the date of signing of High Sea Sale agreement or 15 days from the date of submission of complete set of documentation, whichever is later. Balance 10% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of E&C. Note: In case PBG is not furnished, only 80% payment will be released against 90% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	h. 95% of the basic value will be paid in 45 days from the date of signing of High Sea Sale agreement or 15 days from the date of submission of complete set of documentation, whichever is later. Balance 5% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of commissioning. Note: In case PBG is not furnished, only 85% payment will be released against 95% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	i. 100% of basic value will be paid in 45 days from the date of signing of High Sea Sale agreement or 15 days from the date of submission of complete set of documentation, whichever is later.

j. Comprehensive Annual Maintenance Contract:

Evaluation methodology: Unless and otherwise specified in SCC, CAMC will be applicable for a period of 04 years from the date of expiry of warranty period (or) from the date of completion of commissioning of equipment, whichever is later and the total CAMC value should not be less than 20% of the main supply value. In case the quoted total CAMC value is less than 20% of the main supply value, BHEL shall evaluate Bidders Price deducting differential amount from main supply price and apportioning towards CAMC charges.

Payment terms: 100% CAMC charges along with tax as applicable, will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of CAMC on yearly basis.

k. Terms of Payment for Training: 100% payment will be made in 45 days from the date of completion of Training or 15 days from the date of submission of complete set of invoice along with documentary evidence, whichever is later.

LOADING FACTORS FOR DEVIATION IN PAYMENT TERMS (APPLICABLE FOR IMPORT PROCUREMENT ONLY):

1) For offers received with Sight draft payment term in place of Usance draft, loading applicable will be 1.0% of basic value.

2) For offers received with Letter of Credit payment term with Usance of 45 days, loading applicable will be 2.5% of basic value.
   Additional loading of 2% will be applicable for payment term as Letter of Credit at Sight.

l. Any payment term with credit period of less than 45 days for indigenous supply/HSS and any other variation of payment terms are liable for rejection.

m. Standard payment terms indicated in Clauses: F (a), (b), (c), (d), (e), (f), (g), (h), (i), (j) & (k) will not attract any loading.

Note 1: Basic value of Purchase Order mentioned above will include all components of the purchase order and will exclude only taxes, duties, freight, training charges, E&C and AMC charges (wherever applicable). Wherever the Purchase Order is split into import portion and indigenous portion of supply, the retention money will be 10% (where scope includes E&C) or 05% (where scope includes Erection supervision & Commissioning) of both purchase order values put together.

Note 2: If the E&C could not be completed till the end of the Warranty period due to reasons not attributable to the supplier, BHEL will release the retention money to the supplier against Bank Guarantee for equivalent value valid for an initial period of one year.

Note 3: In case of Physical Export projects or wherever services are rendered by foreign suppliers in India, E&C charges (if quoted separately/extra by bidder) will be paid in 15 days from the date of submission of supplementary invoice/ documents against proof of completion of E&C.

Note 4: In case of multiple packages/units in a power plant, payment of retention money/E&C charges will be processed on pro-rata basis.

Note 5: No deviation will be permitted from the duration of Guarantee/Warranty and/or Comprehensive Annual Maintenance Contract period specified in SCC.

G. Terms & Conditions to be complied under GST regime:

1. All invoices to contain BHEL-EDN (buyer) GSTIN number: 29AAACB4146P1ZB. However for CGST +SGST/UGST billing outside the state of Karnataka, invoice has to be generated with BHEL's Nodal Agency GSTIN number. Address of Nodal Agency along with GSTIN number will be provided by BHEL at the time of issuing dispatch clearance.

2. The Bidder shall mention Bidder's GSTIN number in all quotations and Invoices submitted.

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

4. Invoice submitted should be in the format as specified under GST Laws viz., all details as mentioned in Invoice Rules like GST registration number(GSTIN), invoice number with date of issue, quantity, rate, value, taxes with nomenclature – CGST, SGST, UGST,IGST mentioned separately, HSN Code / SAC Code etc. Invoice should be submitted in original for buyer plus duplicate for credit availment.

5. Payment of GST to Vendor will be made only if it is matching with data uploaded by the Vendor in GST portal.

6. For invoices paid on Reverse charge basis – "Tax payable on reverse charge basis" to be mentioned on the invoice.

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.

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.

9. Vendor should intimate BHEL immediately on the same date of invoicing without any delay.

10. In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the supplies, within the calendar month notified by BHEL.

11. Bidders to note that Rules & Regulations pertaining to E-way bill system are to be strictly adhered to, as and when notified by Govt. authorities.

H. <u>Performance bank guarantee (PBG):</u>

Performance bank guarantee (PBG) will be applicable as called in the tender documents. Unless otherwise specified in the SCC, the PBG against performance of the contract shall be valid for a period of 24 months from the date of dispatch of goods + claim period of 03 months, for a value equal to 10 % of the basic value of the purchase order which will include all components of the purchase order and will exclude only taxes, duties, freight, training charges, E&C and AMC charges (wherever applicable).

1. The BG issued in Indian Rupees by Banks in India is to be executed on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Vendor/Bank issuing the guarantee.
2. No deviation for the duration and value of PBG will be permitted.
3. PBG shall be from any of the BHEL consortium of bankers **(refer Annexure VI)**.
4. PBGs from nationalized banks are also acceptable.
5. PBG should be sent directly by the bank to the dealing executive mentioned in the purchase order located at the address mentioned in the purchase order.
6. PBG should be in the format specified **(refer Annexure VII)**. No deviation to this format will be allowed. However in case BHEL changes the PBG format, bidder shall honor the same.
7. Bank Guarantee should be enforceable in Bangalore.
8. In Case of Bank Guarantees submitted by Foreign Vendors-
   a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in Bangalore.
   b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)

   b.1 Please note that Bank Guarantee issued by any of the Consortium Banks only will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter-Guarantee by Foreign Bank in favour of the Indian Bank's (BHEL's Consortium Bank) branch in India. It shall be noted that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor.

b.2 In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at sl.no. b.1 is required to be followed.

b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time).

9. Expired BGs / PBGs will be returned only after expiry of the claim period or on completion of the contractual obligation with respect to Purchase Order.
10. PBG shall not be applicable for spares.

I. PROVISONS APPLICABLE FOR MSE VENDORS (MICRO AND SMALL ENTERPRISES) :

Benefits/facilities as applicable for Micro and Small Enterprises (MSEs) shall be available to MSEs registered with Government designated authorities as per the Purchase & Price Preference Policy of the Government subject to them becoming eligible otherwise.

Vendors who qualify as MSE vendors are requested to submit applicable certificates (as specified by the Ministry of Micro, Small and Medium Enterprises) at the time of vendor registration. Vendors have to submit any of the following documents along with the tender documents in the Part-I bid to avail the applicable benefits:

a. Attested copy of valid NSIC certificate or
b. Attested copy of either Entrepreneur's Memorandum part II (EM II) certificate/Udyog Aadhar certificate having deemed validity (five years from the date of issue of acknowledgement in EM II/Udyog Aadhar) or
c. EM II/ Udyog Aadhaar certificate along with attested copy of a CA certificate (Format enclosed at Annexure VIII where deemed validity of EM II certificate/ Udyog Aadhar certificate of five years have 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-I in case of two-part bid and three-part bid).

Documents have to be notarized/attested by a Gazetted officer and must be valid as on the date of part I bid opening for the vendors to be eligible for the benefits applicable for MSE vendors. Please note that no benefit shall be applicable if any deficiency in the above required documents are not submitted before the price bid opening/Reverse Auction. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal.

Bidders to however note the documents that shall be furnished in order to establish credentials as MSE vendor should be as per the extant statutory requirements specified by the Ministry of Micro, Small and Medium Enterprises.

d. PURCHASE PREFERENCE FOR MSE VENDORS:

MSE vendors quoting within a price band of L1 + 15% shall be allowed to supply up to 25% of the requirement against this tender provided

1. The MSE vendor matches the L1 price.
2. L1 price is from a non MSE vendor.
3. L1 price will be offered to the vendor nearest to L1 in terms of price ranking (L2 - nearest to L1). In case of non-acceptance by the MSE vendor (L2), next ranking MSE vendor will be offered who is within the L1 + 15% band (if L3 is also within 15% band).
4. 3% of the 25% will be earmarked for women owned MSEs.
5. 25% of the 25% (i.e., 6.25% of the total enquired quantity) will be earmarked for SC/ST owned MSE firms provided conditions as mentioned in (1) & (2) are fulfilled.

6. In case where no SC/ST category firms are meeting the conditions mentioned in (1) and (2) or have not participated in the tender, the 6.25% of earmarked quantity for SC/ST owned MSE firms will be distributed among the other eligible MSE vendors who have participated in the tender.
7. In case after the bid opening it is seen that no MSE has become L1, then depending on the nature of the item, if it is not possible to split the tendered items/quantities on account of reasons like customer contract requirements of supplying one make for a given project or technical reasons like the tendered item being a system etc., then BHEL would not counter offer the L1 prices even though there may be MSE bidders within the +15% band of L1. Such information that tendered quantity will not be split shall be indicated in the SCC.

J. INTEGRITY COMMITMENT IN THE TENDER PROCESS, AND EXECUTION OF CONTRACTS:

1. Commitment by BHEL: BHEL commits to take all measures necessary to prevent corruption in connection with the Tender process and execution of the Contract. BHEL will, during the tender process, treat all bidder / suppliers in a transparent and fair manner, and with equity.

2. Commitment by Bidder(s)/ Contractor(s):

a. The Bidder(s)/ Contractor(s) commit(s) to take all measures to prevent corruption and will not directly or indirectly try to influence any decision or benefit which he is not legally entitled to.
b. The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding or any actions to restrict competition.
c. The Bidder(s)/ Contractor(s) will not commit any offence under the relevant Acts. The Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain or pass on to others, any information or document provided by BHEL as part of business relationship.
d. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to the relevant guidelines issued from time to time by Government of India/ BHEL.

If the Bidder(s) / Contractor(s), before award or during execution of the Contract commit(s) a transgression of the above or in any other manner such as to put his reliability or credibility in question, BHEL is entitled to disqualify the Bidder(s) / Contractor (s) from the tender process or terminate the contract and/ or take suitable action as deemed fit.

K. Integrity Pact (IP): REFER DOCUMENT NAMED CLAUSE ON IP IN TENDER

a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner.
A panel of independent External Monitors (IEMs) have been appointed to oversee implementation of IP in BHEL.
The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory who signs in the offer) along with techno-commercial bid. Only those Bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.
b) Please refer Section-8 of the IP for Role and Responsibilities of IEMs (Annexure IX). In case of any complaint arising out of the tendering process, the matter may be referred to the IEM mentioned in the tender.

Note: No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department."

Annexure I

Guidelines for Indian Agents

- **Definition of Indian Agent**: An Indian Agent of foreign prinicipal is an individual, a partnership, an association of persons, a private or pubile company, that carries our specific obligation(s) towards processing of BHEL tender or finalization or execution of BHEL's contract on behalf of the foreign supplier.

In case of yes, vendor to note the following and reply accordingly:

i. BHEL shall deal directly with foreign vendors, wherever required, for procurement of goods. However, if the foreign principal desires to avail of the services of an Indian agent, then the foreign principal should ensure compliance to regulatory guidelines - which require mandatory submission of an Agency Agreement.

ii. It shall be incumbent on the Indian agent and the foreign principal to adhere to the relevant guidelines of Government of India, issued from time to time.

iii. The Agency Agreement should specify the precise relationship between the foreign OEM / foreign principal and their Indian agent and their mutual interest in the business. All services to be rendered by agent/ associate, whether of general nature or in relation to the particular contract, must be clearly stated by the foreign supplier/ Indian agent. Any payment, which the agent or associate receives in India or abroad from the OEM, whether as commission or as a general retainer fee should be brought on record in the Agreement and be made explicit in order to ensure compliance to laws of the country.

iv. Any agency commission to be paid by BHEL to the Indian agent shall be in Indian currency only.

v. Tax deduction at source is applicable to the agency commission paid to the Indian agent as per the prevailing rules.

vi. In the absence of any agency agreement, BHEL shall not deal with any Indian agent (authorized representatives / associate / consultant, or by whatever name called) and shall deal directly with the foreign principal only for all correspondence and business purposes.

vii. The "Guidelines for Indian Agents of Foreign Suppliers" enclosed at annexure –'A' shall apply in all such cases.

viii. The supply and execution of the Purchase Order (including indigenous supplies/ service) shall be in the scope of the OEM/ foreign principal. The OEM/ foreign principal should submit their offer inclusive of all indigenous supplies/ services and evaluation will be based on 'total cost to BHEL'. In case OEM/ foreign principal recommends placement of order(s) towards indigenous portion of supplies/ services on Indian supplier(s)/ agent on their behalf, the credentials/ capacity/ capability of the Indian supplier(s)/ agent to make the supplies/ services shall be checked by BHEL as per the extant guidelines of Supplier Evaluation, Approval & Review Procedure (SEARP), before opening of price bids. In this regard, details may be checked as per Annexure-B (copy enclosed). It will be the responsibility of the OEM/ foreign principal to get acquainted with the evaluation requirements of Indian supplier/ agent as per SEARP available on www.bhel.com.

The responsibility for successful execution of the contract (including indigenous supplies/ services) lies with the OEM/ foreign principal. All bank guarantees to this effect shall be in the scope of the OEM/ foreign principal.

—x—

Vendor's Signature with Seal

Annexure-A

Guidelines for Indian Agents of Foreign Suppliers

1.0 There shall be compulsory registration of agents for all Global (Open) Tender and Limited Tender. An agent who is not registered with BHEL shall apply for registration in the registration form in line with SEARP.

1.1 Registered agents will file an authenticated Photostat copy duly attested by a Notary Public/Original certificate of the Principal confirming the agency agreement and giving the status being enjoyed by the agent and the commission/ remuneration/ salary/ retainership being paid by the principal to the agent before the placement of order by BHEL.

1.2 Wherever the Indian representatives have communicated on behalf of their principals and the foreign parties have stated that they are not paying any commission to the Indian agents, and the Indian representative is working on the basis of salary or as retainer, a written declaration to this effect should be submitted by the party (i.e. Principal) before finalizing the order.

2.0 Disclosure of particulars of agents/ representatives in India, if any.

2.1 Tenderers of Foreign nationality shall furnish the following details in their offers:

2.1.1 The Bidder(s)/ Contractor(s) of foreign origin shall disclose the name and address of the agents/ representatives in India if any and the extent of authorization and authority given to commit the Principals. In case the agent/ representative be a foreign Company, it shall be confirmed whether it is existing Company and details of the same shall be furnished.

2.1.2 The amount of commission/ remuneration included in the quoted price(s) for such agents/ representatives in India.

2.1.3 Confirmation of the Tenderer that the commission/ remuneration, if any, payable to his agents/ representatives in India, may be paid by BHEL in Indian Rupees only.

2.2 Tenderers of Indian Nationality shall furnish the following details in their offers:

2.2.1 The Bidder(s)/ Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any, indicating their nationality as well as their status, i.e. whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal specifically authorizing the agent to make an offer in India in response to tender either directly or through the agents/ representatives.

2.2.2 The amount of commission/ remuneration included in the price (s) quoted by the Tenderer for himself.

2.2.3 Confirmation of the foreign principals of the Tenderer that the commission/ remuneration, if any, reserved for the Tenderer in the quoted price(s), may be paid by BHEL in India in equivalent Indian Rupees on satisfactory completion of the Project or supplies of Stores and Spares in case of operation items.

2.3 In either case, in the event of contract materializing, the terms of payment will provide for payment of the commission/ remuneration, if any payable to the agents/ representatives in India in Indian Rupees on expiry of 90 days after the discharge of the obligations under the contract.

2.4 Failure to furnish correct and detailed information as called for in paragraph 2.0 above will render the concerned tender liable to rejection or in the event of a contract materializing, the same liable to termination by BHEL. Besides this there would be a penalty of banning business dealings with BHEL or damage or payment of a named sum.

—x—

ANNEXURE - II
LIST OF INTERNATIONAL GATEWAY AIRPORTS

For air based consignment, terms of delivery will be on FCA basis from following listed airports only. Vendors are requested to verify this list for use before submission of offer.

SCHEDULE NO	COUNTRY	CURRENCY CODE	AIRPORT
D01	UK	GBP	LONDON (HEATHROW)
D02	UK	GBP	NEW CASTLE
D03	UK	GBP	OXFORD. CHETLAM
D04	UK	GBP	BRISTOL. WELLINGBOROUGH
D0S	UK	GBP	BIRMINGHAM
DO6	UK	GBP	EAST MIDLANDS
D07	UK	GBP	MANCHESTER
D08	UK	GBP	LEEDS
D09	UK	GBP	GLASGOW
D10	FRANCE	EURO	PARIS (ROISSY) & LYON
D11	SWEDEN	EURO	STOCKHOLM
D12	SWEDEN	EURO	GOTHENBERG & MALMO
D13	ITALY	EURO	ROMA, MILAN
D14	ITALY	EURO	TURIN, BOLOGNA, FLORENCE
D1S	NETHERLANDS	EURO	AMSTERDAM, ROTTERDAM
D16	AUSTRIA	EURO	VIENNA, LINZ, GRAZ
D17	BELGIUM	EURO	ANTWERP, BRUSSELS
D18	DENMARK	DKK	COPENHAGEN
D19	JAPAN	JPY	TOKYO, OSAKA
D20	SINGAPORE	SGD	SINGAPORE
D21	CANADA	CAD	TORONTO
D22	CANADA	CAD	MONTREAL
D23	USA	USD	NEW YORK, BOSTON
D24	USA	USD	CHICAGO
D2S	USA	USD	SAN FRANCISCO, LOS ANGELES
D26	USA	USD	ALANTA, HOUSTON
D27	GERMANY	EURO	MUNICH, KOLN, DUSSELDORF, HANNOVER, HAMBURG, STUTTGART, DAMSTADT, MANIHIEM, NURUMBERG
D28	GERMANY	EURO	FRANKFURT
D29	GERMANY	EURO	BERLIN
D30	SWITZERLAND	SFR	BASLE, ZURICH, GENEVA
D31	SPAIN	EURO	BARCELONA
D32	AUSTRALIA	AUD	SYDNEY
D33	AUSTRALIA	AUD	MELBOURNE
D34	AUSTRALIA	AUD	PERTH
D3S	CZECH	EURO	PRAGUE
D36	HONG KONG	HKD	HONG KONG
D37	NEW ZELAND	NZD	AUCKLAND
D38	RUSSIA	USD	MOSCOW
D39	SOUTH KOREA	USD	KIMPO INTERNATIONAL, INCHEON
D40	FINLAND	EURO	HELSINKI
D41	ROMANIA	EURO	BUCHAREST
D42	NORWAY	EURO	OSLO
D43	IRELAND	EURO	DUBLIN
D44	ISRAEL	USD	TEL AVIV
D45	UAE	USD	DUBAI
D46	OMAN	USD	MUSCAT
D47	EGYPT	USD	CAIRO
D48	TAIWAN	USD	TAIPEI
D49	UKRAINE	USD	KIEV
D50	CHINA	USD	SHANGHAI, SHENZHEN
D51	PHILIPINES	USD	MANILA
D52	MALAYSIA	USD	KUALALUMPUR, PE NANG
D53	CYPRUS	USD	LARNACA
D54	SOUTH AFRICA	USD	JOHANNESBERG, DURBAN
D55	SLOVAKIA	EURO	BARTISLOVA
D56	SAUDI ARABIA	SAR	RIYADH
D57	TURKEY	EURO	ISTANBUL
D58	THAILAND	USD	BANGKOK
D59	BRAZIL	USD	SAO PAULO, RIO DE JANEIRO

ANNEXURE – III

DISCREPANCY IN WORDS & FIGURES – QUOTED IN PRICE BID

Following guidelines will be followed in case of discrepancy in words & figures-quoted in price bid:

(a) If, in the price structure quoted for the required goods/services/works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall 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.

(b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and

(c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

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

ANNEXURE - IV

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 IFSC Code(applicable for NEFT)
8 Bank IFSC code(applicable for RTGS) (Indian Financial System Code)

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 / transfering 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: Telephone No. with STD Code

Company Seal

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 Querry, please call concerned purchase executive.

ANNEXURE - V

PRESENT PROCEDURE FOR SALE IN TRANSIT (HIGH SEA SALES)

In case of High Sea Sales, vendor should submit following documents:

1. **ORIGINAL HIGH SEA SALES AGREEMENT**
   - Sale agreement (on Rs. 200/- non-judicial stamp paper & notarised with 2 witnesses with identity) has to be signed between BHEL and the Party importing material. The date of the sale documents should be in between the date of House Air Way Bill / Bill of Lading and before landing of the goods in Indian origin.
   - Following shall be included in the High Sea Sales Agreement:
     "THE BUYER ALSO UNDERTAKE DISCHARGES, THE OBLIGATION AND FULFILLMENT OF CONDITIONS, IF ANY, ATTACHED TO THE IMPORTATION, ASSESSMENT AND CLEARANCE OF THE GOODS IN TERMS CUSTOMS TARIFF ACT 1975, THE CUSTOMS ACT 1962 & RULES & REGULATIONS MADE THERE UNDER AND OTHER RELEVANT ACTS, ORDERS, NOTIFICATIONS".

2. **ORIGINAL INVOICES: INDIGENOUS RUPEE INVOICE & FOREIGN CURRENCY INVOICE**
   - Prices should be C.I.F., designated airport/seaport basis.
   - I.E.C., C.S.T., K.S.T. Nos. to be mentioned.
   - Description of item (Nomenclature), Unit & Quantity in both the Foreign Currency & the Indigenous Invoice in Rupee shall be exactly as per Purchase Order Description of item, Quantity and Unit. The Indigenous Invoice value shall be exactly as per Purchase Order value.
   - Seller should give Foreign Currency Invoice from the original consignor. The Foreign Currency Invoice value should be at least 2% (two per cent) less than the Indigenous Rupee Invoice value in equivalent foreign currency.

4. **ORIGINAL HOUSE AIR WAY BILL/ BILL OF LADING**
   - The sale agents should duly endorse House Air Way Bill (HAWB) for air shipments or original Bill of Lading (O.B.L.) for sea shipments and Foreign Currency Invoice in favour of BHEL-EDN.

5. **ORIGINAL CARGO ARRIVAL NOTICE FROM FORWARDER.**

6. **ORIGINAL DELIVERY ORDER ISSUED IN NAME OF BHEL-EDN.**

7. **ORIGINAL PACKING LIST.**

8. **A LETTER TO THE COMMISSIONER OF CUSTOMS FOR EFFECTING ABOVE SALE.**

9. **A LETTER TO THE DEPUTY ASSESSOR (OCTROI) FOR EFFECTING ABOVE SALE IN FAVOUR OF BHEL.**

REMARKS: In case vendor needs any clarifications on the above, the same may be sought in writing.

Annexure-VI

BHEL MEMBER BANKS (LIST OF CONSORTIUM BANKS)

BANK GUARANTEE (BG) SHALL BE ISSUED FROM THE FOLLOWING BANKS ONLY:

	Nationalised Banks		**Nationalised Banks**
1	Allahabad Bank	19	Vijaya Bank
2	Andhra Bank		**Public Sector Banks**
3	Bank of Baroda	20	IDBI
4	Canara Bank		**Foreign Banks**
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 Ltd. (HSBC)
8	Indian Overseas Bank	24	Standard Chartered Bank
9	Oriental Bank of Commerce	25	J P Morgan
10	Punjab National Bank		
11	Punjab & Sindh Bank		**Private Banks**
12	State Bank of India	26	Axis Bank
13	State Bank of Hyderabad	27	The Federal Bank Limited
14	Syndicate Bank	28	HDFC Bank
15	State Bank of Travancore	29	Kotak Mahindra Bank Ltd
16	UCO Bank	30	ICICI Bank
17	Union Bank of India	31	IndusInd Bank
18	United Bank of India	32	Yes Bank

Note:

- All BGs must be issued from BHEL consortium banks listed above.
- This list is subject to changes. Hence vendors are requested to check this list every time before issuing BGs.
- Bank Guarantees issued by Co-Operative Banks/Financial Institutions cannot to be accepted under any circumstance.

Annexure-VII

BANK GUARANTEE FOR PERFORMANCE SECURITY

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

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 _____[1] through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) with its registered office at_____[2] hereinafter referred to as the ' Vendor / Contractor / Supplier ', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated .....[3] valued at Rs.....[4] (Rupees ----------)/FC.....(in words.....) for .....[5] (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide a Contract Performance Bank Guarantee, equivalent to .....% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we, ..., (hereinafter referred to as the Bank), having registered/Head office at ..... and inter alia a branch at ..... being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount of Rs ----------[6] (Rupees ----------) without any demur, immediately on first 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 Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or Tribunal, 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 thereunder and the Vendor / Contractor / Supplier shall have no claim against us for making such payment.

We the .....bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/satisfactory completion of the performance guarantee period as per the terms of the 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 or discharged.

We .....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 said Vendor / Contractor / Supplier 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 Vendor / Contractor / Supplier 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 reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

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 Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier 's liabilities.

This Guarantee shall remain in force upto and including..... [7] and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier 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.

Unless a demand or claim under this guarantee is made on us in writing on or before the .....[8]we shall be discharged from all liabilities under this guarantee thereafter.

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..... [6]
b) This Guarantee shall be valid up to .....[7]
c) Unless the Bank is served a written claim or demand on or before _____[8] all rights under this guarantee 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.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

[1] *NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited*

[2] *NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.*

[3] *DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE*

[4] *CONTRACT VALUE*

[5] *PROJECT/SUPPLY DETAILS*

[6] *BG AMOUNT IN FIGURES AND WORDS*

[7] *VALIDITY DATE*

[8] *DATE OF EXPIRY OF CLAIM PERIOD*

Annexure – VIII
(Applicable only for MSE suppliers)
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-11 ..... 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.

The above investment of Rs. .....Lacs in within permissible limit of Rs.....Lacs for.....Micro / 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

Annexure-1

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for _____ _____ _____ . The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

1.1.3 The Principal will exclude from the process all known prejudiced persons.

1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions:

Section 2 - Commitments of the Bidder(s)/ Contractor(s)

2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/ Bid Security.

4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to

demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

Section 5 - Previous Transgression

5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/ Contractors / Sub-contractors

6.1 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors.

6.2 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 - Independent External Monitor(s)

8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.

8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality in line with Non- disclosure agreement.

8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.

8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.

8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.

8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.

8.9 IEM should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.

8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.12 The word `Monitor' would include both singular and plural.

Section 9 - Pact Duration

9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.

9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

10.5 Only those bidders / contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal

(Office Seal)

For & On behalf of the Bidder/

Contractor

(Office Seal)

Place----------

Date----------

Witness:_____

(Name & Address) _____

_____

Witness:_____

(Name & Address) _____

_____

Clause on IP in the tender

"Integrity Pact (IP)

(a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

Sl	IEM	Address	Phone & Email
1.	Shri D.R.S Chaudhary, IAS (Retd.)	E-1/164, Arera Colony Bhopal 462016 (M.P.)	dilip.chaudhary@icloud.com
2.	Mrs. Pravin Tripathi, IA & AS (Retd.)	D-243, Anupam Gardens, Lane IB, Neb Sarai, Sainik Farms, New Delhi – 110 068	pravin.tripathi@gmail.com

(b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.

(c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:

Details of contact person(s):

(1)
Name:_____
Deptt: _____
Address: _____
Phone: (Landline/ Mobile)
_____
Email: _____
Fax: _____

(2)
Name:_____
Deptt: _____
Address: _____
Phone: (Landline/ Mobile)
_____
Email: _____
Fax: _____

ಭಾರತ್ ಹೆವಿ ಎಲೆಕ್ಟ್ರಿಕಲ್ಸ್ ಲಿಮಿಟೆಡ್
भारत हेवी इलेक्ट्रिकल्स लिमिटेड
Bharat Heavy Electricals Ltd.,
(A Government of India undertaking)
Electronics Division
PB 2606 , Mysore Road Bangalore , 560026 INDIA

CE: PR: 003- Rev 01

SPECIAL COMMERCIAL CONDITIONS OF CONTRACT

Reference is brought to BHEL's Instructions to Bidders (Document Ref: CE: PR: 001- Rev 02) and General Commercial Conditions for Contract (Document Ref: CE: PR: 002- Rev 01). These documents along with required annexures are available in our website: _____.These two documents along with Special Conditions of Contract annexed to this RFQ will form an integral part of the contract as and when the RFQ culminates into a Purchase Order / Contract.

RFQ No: NKR0000316 **RFQ Date: As per E-Procurement System**
Due Date: As per E-Procurement System **Customer/Project: Yadadri 5X800MW**

Item Description: Walkie Talkie System

E-tendering – Applicable

TYPE OF BID: Two Part Bid

Purchase Executives: Clarifications with regard to the tender shall be addressed to purchase officers whose e-mail IDs are given below: **nilmanikumar@bhel.in** or **isaac@bhel.in** or **savitha@bhel.in**

Submission of documents post PO viz., drawings /data sheet etc. as indicated in Cl: 04 of GCC: Within **__2__** weeks from the date of receipt of Purchase Order. Delay in submission of complete set of specified documents in NIT, will attract Penalty as per GCC Clause no.:04.a.

Splitting of tendered quantity to MSE vendors: The procurement is on package basis. Hence tendered quantity will not be split to MSE vendor

Destination: a) For Indigenous scope of supply, items are to be directly despatched to BHEL's/customer's project Site Office or Stores located at/**near 5x800MW Yadadri Thermal Power project, Veerlapalem Village, Damercherla Mandal, Nalgonda District - 508207, Telangana** Consignee other details required for dispatch will be issued by BHEL along with Despatch Clearance.

b) For Imported scope of supply and high sea sale, destination is **Bangalore** . In case of shipment by sea, port of discharge will be any port in India seaport and port of delivery shall be ICD-Bangalore.

Project Benefits:

Imported scope of supply: Merit Duty is applicable

Terms of Delivery:

- **Indigenous scope of supply:**

  Ex-works < (station of dispatch)> (including Packing & Forwarding charges but excluding Taxes & Duties).

- **Imported scope of supply:**

  F.C.A. (for air consignments) < (indicate international port of dispatch)>/ C.I.F. (for sea consignments) < ICD,Bangalore > (including Packing, Forwarding, Handling, Ancillary charges like processing of Sight Draft/ Letter of Credit, negotiation of bank documents, Export declaration, Country of Origin etc.).

  Kindly indicate the approximate weight of the total imported consignment, which is required for calculating air-freight charges: _____

  Under-mentioned details shall be provided against indigenous supplies and services:

  a. GSTIN (no.) of place of supply: _____

  b. HSN (Harmonized System of Nomenclature) code: _____

Applicable tax and Rate: _____&_____

c. SAC (Service Accounting Code) no.:_____
Applicable tax and Rate: _____&_____

d. If service is also involved, GSTIN (no.) of place of supply of service: _____

I. Bidders to mandatorily provide confirmation/compliance for the under-mentioned terms:

SL NO.	TERMS	BHEL ACCEPTABLE TERM	BIDDER'S CONFIRMATION	REMARKS,if any
01	**Reverse Auction**	Will be intimated separately to qualified bidders after finalization of techno-commercial evaluation. Non-acceptance to participate in RA may result in non-consideration of the bid, in case BHEL decides to go for RA. In case BHEL does not resort to Reverse Auction, the price bids and price impacts (if any) shall be opened as per BHEL's standard practice.	**AGREE**	
02	**Delivery Period**	Within __**08**____ weeks from the date of issue of Manufacturing clearance along with approved document. Manufacturing clearance will be issued strictly as per project requirement. Delay in contractual delivery will attract Penalty as per GCC Clause no.:04.b.	**AGREE** …… weeks	
03	**Terms of Payment**	Refer Clause "**F**" of Instructions to Bidder for BHEL standard Payment terms and loading factors applicable for non-compliance against payment terms: **Indigenous Scope:** b)Supply with Erection Supervision & Commissioning **Imported Scope:** e)Supply with Erection Supervision & Commissioning **High-Sea sales:** h) Supply with Erection Supervision & Commissioning	**AGREE**	

II. Bidder to note that Deviations shall not be permitted for the below mentioned terms and are deemed to be complied. In case of non-compliance/deviation, offer shall be liable for rejection:

(1) **Validity:** The offer will be valid for a period of _**90**_ days from the date of part-I bid opening and in case of Negotiation/ Counter-offer/Reverse Auction, price validity will apply afresh for a period of _**60**_ days from the date of according final price by bidder (or) upto original validity period, whichever is later.

(2) **Guarantee/ Warranty: 36**_ months from the date of dispatch of goods or _24_ months from the date of commissioning of goods, whichever is earlier.

(3) **Performance Bank Guarantee (PBG):** PBG will be applicable for a period of _**36**_ months from the date of dispatch of goods + claim period of **03** months, for a value equal to 10% of the basic value of the purchase order. Refer Clause "H" of Instructions to Bidders. Also note that PBG should be in the format specified in Annexure VII of ITB and no deviation to this format will be allowed.

Note: In case PBG is not furnished, the 10% basic amount will be withheld from the supply invoice. This withheld amount will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.

(4) **Despatch Documents:** Complete set of despatch documents (original + 1 photocopy set) as per Purchase Order shall be forwarded to Purchase Executive/BHEL directly. Depending upon the project/customer demands, despatch documents may include one or more documents from the following: Invoice (02 sets of original), Lorry Receipt (L/R), Packing List, Air Way Bill (AWB)/Bill Of Lading (BOL), Copy of High Sea Sales (HSS) agreement, Country of origin certificate, NIL Short Shipment Certificate, Original Performance Bank Guarantee (directly from issuing bank to BHEL), insurance intimation letter, POD (Proof of Delivery) on L/R.
The precise list of despatch documents needed for the project will be specified in the Purchase Order.

One set of Invoice, Packing List and L/R or AWB shall be e-mailed/faxed immediately to BHEL-EDN after despatch.

(5) **Freight Charges (for indigenous scope of supply):** Freight charges shall be to vendor's account. Vendor to quote reasonable lump sum Freight charges separately, with applicable tax in priced offer.

(6) Any additional commercial term or deviation in commercial term, if sought by any vendor, should be clearly brought out in Part -1 bidding form special commercial conditions of contract. Any additional commercial term or deviation in commercial term mentioned anywhere else shall be ignored and not be considered for evaluation.

(7) **Evaluation criteria for tendered item/s:**Items will not be split on item-wise lowest offer. Items shall be evaluated and procured as a combined package.

(8) **Annual Maintenance Contract :** Not Applicable

With this, we hereby confirm that all the terms & conditions as indicated in Instructions to Bidders (Document Ref: CE: PR: 001- Rev 02) & General Commercial Conditions for Contract (Document Ref: CE: PR: 002- Rev 01) are accepted without any deviation.

Vendor's Signature with Seal

Note :

1. Any technical or commercial clarification for this tender can be raised within one week of floating this tender. No clarification will be entertained by BHEL after given cutoff date.

2. Bidder has to submit itemwise break-up price in line with BOM of specification as attachment in price bid

3. Total price submitted in online e-procurement portal shall be considered for evaluating L1 vendor. For further processing of offer of finalized L1 vendor, in case of mismatch in BOM quantities mentioned in price breakup uploaded / attached with price bid, following method shall be followed:

a. If the quantity mentioned in breakup for any item(s) is less than quantity mentioned in technical specification, bidder shall supply quantity as per technical specification within quoted price. The unit rate of such items shall be re-calculated by dividing sub-total with quantity required as per technical specification.

b. If the quantity mentioned in breakup for any item(s) is more than quantity mentioned in technical specification and bidder is L1 based on their e-procurement portal price, BHEL will use unit rate of such item(s) mentioned in breakup to calculate the sub-total of such item(s) as per quantity mentioned in technical specification/finalised during technical evaluation to meet technical specification.

4. Evaluation methodology - Bidder's Techno-commercial (Part - 1 bid) only will be opened on due date. Offer of only those bidders who qualify in Part - 1 bid will be considered for Price bid opening (Part -2). Schedule of price bid opening will be intimated to qualified bidders in part 1 bid

5. Any tender condition does not prohibit any bidder to submit their offer along with clause wise deviation from the specification/commercial terms of tender. Changes, if any, in technical specification / Scope etc shall be informed to participating bidders only.

6. Wherever Indigenous suppliers are rendering E&C services at project site, NO separate/extra Erection supervision and commissioning charges shall be quoted. However scope of Erection/supervision/commissioning or any combination of these site support services will be in vendor scope as detailed in technical specification of tender.

7. In case Foreign suppliers are rendering E&C services at project site, separate E&C charge may be quoted . In such case request may be made to BHEL at leat three days prior to due date of tender submission. BHEL will provide line item for quoting E&C charge in E-procurement portal to these vendors.

PROJECT

YADADRI 5x800MW STPP

CUSTOMER

M/s TSGENCO

PURCHASE SPECIFICATION

FOR

WALKIE TALKIE SYSTEM

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REVISION:00

APPROVED

RAJASEKAR K

PREPARED	ISSUED	DATE
AMIT KR SHARMA	416	04/07/2019

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1.	Section-A : General Instruction to bidders	01 sheets
2.	Section-B : Pre Qualification Requirements	01 sheets
3.	Section-C: Technical specifications	
	a) Scope of Supply	04 sheets
	b) Technical Requirement	02 sheets
4.	Annexure- I : Bill of material	01 Sheets
5.	Annexure-II : Technical details	41 sheets

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SECTION- A

GENERAL INSTRUCTIONS TO BIDDERS:

Introduction: Bidders are required to submit technical offer for supply, installation and commissioning of Walkie Talkie system. All required documents against this Tender/Specification shall be submitted in English only.

Pre-qualification requirements (PQR) are clearly mentioned in Section-B of this Specification.

1. Evaluation methodology:

a. Bidder's PQR document cover only will be opened first for review and evaluation by BHEL. In case the bidders offer do not meet the PQR, then corresponding techno-commercial offer will not be considered for further evaluation in the tender. Technical bids of ONLY those bidders who meet PQR shall be opened for review and further consideration.

b. Bidders declared qualified for meeting Pre-Qualification Requirements mentioned in section B but are not in customer approved vendor list for the project, their credential documents as provided by bidder under section-B shall be forwarded to customer for approval. Technical offer of only customer approved vendors will be considered for further process of procurement. Offer of Vendors not approved by customer will be technically rejected and shall not be considered for further process for procurement.

2. If required during evaluation of PQR and Technical offers/bids, vendor should be present at BHEL Electronic Division, Bangalore, for discussions. Further in the event of order, during approval of the Vendor documents by Customer, Vendor shall accompany BHEL representative for discussions with customer / consultant.

3. This specification does not prohibit any vendor to submit their offer along with clause wise deviation from the specification. Changes in technical specification / Scope etc shall be informed to Participating bidders only.

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SECTION- B

Pre-Qualification Requirements (PQR)

a) The bidder should be a reputed manufacturer or system Integrator of walkie talkie system and shall have designed, engineered, supplied and commissioned walkie talkie system in last 3 years to any industry.

Following supporting documents shall be submitted:

i) Purchase Order Copies.

ii) Commissioning completion MOM or letter by end customer to substantiate their experience in commissioning of Walkie Talkie system.

iii) Bidder may also submit Performance certificates issued by end customer, if available.

iv) List of past supplies of walkie talkie system in tabular form mentioning name of project, year of supply, year of commissioning, make of walkie talkie etc

b) Bidders based outside India, who are submitting offer for this tender, shall have authorized representatives in India for support related to Documentation, technical support, troubleshooting, Erection, Commissioning & other co-ordination/statutory works. Letter from bidder detailing Indian representative organization chart should be provided. Bidder to also furnish an undertaking letter that in case of change in Indian representative / agent, bidder shall continue to support the supplies made through this tender.

c) BHEL shall issue call for service / commissioning with maximum 15 days' notice. Bidder to submit undertaking letter for agreeing to visit project sites within above notice period.

d) System Integrators participating on behalf of OEM of walkie talkie system should submit Manufacturer Authorisation Letter from OEM for their consent to participate in this tender and also indicating that OEM shall extend all technical support, if required, during commissioning / operation of the system.

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Section-C

SCOPE OF SUPPLY

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PREPARED	ISSUED	DATE
AMIT KR SHARMA	416	04/07/2019

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1. SCOPE OF SUPPLY

Bill of material for scope of supply is as below:

Sl.no	Description of items for Walkie Talkie System	BOM	
		Qty	Unit
1	Wireless handsets portable radios with batteries, belt clip, DTMF keypad, Battery Charger and Leather carrying Case	150	set
2	Base station with built in speaker, DTMF keypad microphone assembly, decoder and CTCSS encoder, Power Supply Unit and other accessories	10	set
3	3 db gain VHF vertical colinear Antennae for each Base station including lightning arrestor and aviation warning lights as per statutory requirements	10	set
4	GI pipe (50 mm) of 15ft height for each antenna	10	set
5	Coaxial cable (each of length 30 m) with connectors for connecting each antennae to their corresponding base station	10	set
6	Repeater & Accessories		
	a) Repeater	3	set
	b) 3 db gain VHF vertical colinear Antennae for repeater including lightning arrestor and aviation warning lights as per statutory requirements	3	set
	c) Super-Flexible semi-rigid Coaxial cable (length 30 m) with connectors for connecting antennae to repeater	3	set
	d) GI pipe (50 mm) of 15ft height for antenna	3	set
	e) Surge protector	3	set
	f) Other accessories for repeater	3	set
7	Radio Telephone Interface Unit to interface and communicate with the IP based EPABX System (with required cable and all accessories)	1	set
8	Operating License for frquency and this shall involves : a) Liaisoning b) Obtaining License [**It excludes Royalty and license fee payable to WPC**]	1	set
9	Any other item to complete the system	1	set
	INSTALLATION, COMMISSIONING AND TRAINING		
1	Visit to site for preliminary study for routings.	1	LS
2	Preparation of cable schedules and routing diagram	1	LS
3	Laying of cables between EPABX, Radio Telephone Interface Unit, etc	1	LS
4	Commissioning and Integration of complete system	1	LS
5	Training for walke talkie system - 3 mandays at site	1	LS

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2.1.0 DOCUMENTS TO BE FURNISHED

2.1.1 Along with the offer (in one set)

1. Technical write-up
2. Technical literature / Catalog of each component
3. Clause-wise deviation list
4. Complete Bill of Material with make & Model

2.1.2 After placement of Purchase Order:

01. Technical write-up
02. Detailed Bill of Material with Make & Model
03. Technical literature / Catalog for all components
04. Data sheets
05. Internal interconnecting wiring diagram.
06. Quality Plan
07. Interfacing diagram & cable type details used/ suggested

2.1.3 Before Dispatch: (4 sets per project for review/acceptance)

01. Type test reports/Certificates as per specification/approved QP
02. Preliminary Instruction /O&M Manual

2.1.4 Final approved drawings/documents(4 sets for each project)
(At the time of Dispatch)

(a) Instruction/O&M manual
(b) Bill of material
(c) Data sheets
(d) Drawings GA/layout/wiring/interconnection/schematic, etc
(e) Technical literatures/Catalogs

These documents shall be in final as-built/approved status. Apart from above one (01) set of Instruction / O&M Manual shall also be sent directly to site along each system under each project. One (01) set soft copy of Final document shall also be provided to BHEL.

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Section-C

TECHNICAL REQUIREMENTS

REVISION:00

APPROVED

RAJASEKAR K

PREPARED	ISSUED	DATE
AMIT KR SHARMA	416	04/07/2019

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1.0 GENERAL TECHNICAL REQUIREMENTS

This specification covers the requirement of WALKIE TALKIE SYSTEM :

.

1.1. This system shall include the following:

a. Base stations with antenna, power supply units, inverters, voltage stabilizers and all other accessories.

b. Hand held two way transmitter receiver sets with necessary license

c. Battery charger for hand-set batteries – .

d. The system shall be provided with operating license.

1.2. The system shall be capable of being coupled with the EPABX system such that any wireless set can be contacted from any of the EPABX intercom extensions and any wireless set can be used to contact any of the EPABX-intercom number/pager through the EPABX. It shall also be possible to make a page call on the paging system from the wireless sets.

1.3. The wireless sets shall be addressable type and light weight.

1.4. The system shall have a minimum operating range of 15 km.

1.5. Refer Annexure-I for detailed project specific technical requirement

I N D E X

CLAUSE NO.	D E S C R I P T I O N
1.00.00	INTENT OF SPECIFICATION
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1.00.00 INTENT OF SPECIFICATION

1.00.01 This specification is intended to cover the design, manufacture, assembly, testing at manufacturer's works, supply & delivery, of **WIRELESS COMMUNICATION SYSTEMS**, complete with all accessories for efficient and trouble-free operation for the 1 x 800 MW Stage VII , Unit # 12 Kothagudem Thermal Power Station for Telangana State Power Generaton Corporation Ltd. (TSGENGO)..). The duty of services as specified below and in other drawings forming part of this specification are as required for safe, reliable, trouble free and efficient operation with adequate maintenance facilities as per modern power station practices and as per terms and conditions enumerated in this specification.

1.00.02 The technical specifications that follow serve as the guide specification for the Wireless Communication Systems

1.00.03 In conformity with the guidelines provided in the specification, the scope of works shall completely cover all the Wireless Communication Systems, functions, activities and documentation specified under the accompanying Technical Specifications. It will include but not limited to the following:

a) Detailed design and engineering of the manufactured equipment; system integration and system engineering.

b) Assisting TSGENCO fill up the frequency application form, submission of the same to SACFA (Standing Advisory Committee for Frequency Application) and arranging to obtain the necessary frequency allocation and site clearance from the central and regional authority etc.

c) Complete manufacture including shop testing.

d) Specifying, procurement, quality inspection of bought-out items from sub-suppliers. Design co-ordination for and integration with bought-out items with sub-suppliers.

e) Providing engineering drawings, documents, licensed copy of software and developmental tools, data, instruction, operation and maintenance manual etc. for Owner’s review/ approval / record.

f) Arranging for Owner’s inspection and testing of manufactured as well as bought-out items at the respective works.

g) Packing and transportation of instruments, equipment, accessories and erection hardware from the manufacturer’s works to the site, including transit insurance.

h) Opening of site office at location provided by Owner.

i) Receipt, storage, preservation and conservation of instruments, equipment and erection hardware at the site.

j) Fabrication of site-constructed items.

k) Pre-assembly (if any), erection, testing and commissioning of all the equipment and instruments in totality (including erection hardware, accessories/devices etc).

l) Performing availability tests and Performance and Guarantee tests on completion of commissioning.

m) Prepare and submit all approved and as-built drawings both in hard and soft copies.

n) Furnishing of spares, tools and tackle, test instruments.

o) Fulfilling post-commissioning liabilities.

p) Arranging for training of Owner's personnel of different categories.

q) Other activities detailed in the previous and subsequent sections of the Specification.

r) Any other activity, not mentioned explicitly, but felt by Bidder as essential for successful completion of work.

1.00.04 The requirements enumerated in this specification are based on typical configuration of the plant for bidding purpose. It shall be the responsibility of Bidder to interact with other agencies and package vendors during the time of detail engineering and installation and offer the system to meet the actual functional requirements of the plant.

1.00.05 It is not the intent to completely specify all details of design and construction features herein. Nevertheless, the equipment and their installation shall conform to high standards of engineering design and workmanship in all respects.

1.00.06 Incase of any conflict or contradiction between any two or more sections of this specification the more stringent condition shall generally be applicable. Owner, however, reserves the right to relax this condition at his discretion.

2.00.00 ABBREVIATION

- BOQ - Bill of Quantities
- CCB - Central Control Building
- CCR - Central Control Room
- DCS - Distributed Control System
- DVSP - Digital Voice Storage Playback
- GCC - General Conditions of Contract
- LED - Light Emitting Diode
- LOI - Letter Of Intent
- MDF - Main Distribution Frame
- MTTR - Mean Time To Repair

- PA - Public Address
- PABX - Private Automatic Branch Exchange
- PC - Personal Computer
- QAP - Quality Assurance Plan
- RH - Relative Humidity
- RMS - Root Mean Square
- SPL - Sound Pressure Level
- UCR - Utilities Control Room
- UHF - Ultra High Frequency
- UPS - Uninterruptible Power Supplies

3.00.00 SCOPE OF WORK

3.01.00 GENERAL

3.01.01 The scope of work in this document specifies the technical & contractual requirements for the design, supply, erection, testing and commissioning of wireless communication system (walkie - Talkie) for the
Project as “turn-key” plant-wide stand-alone package unit with suitable interfaces as specified.

3.01.02 Bidder shall be fully responsible for both the products and their relevant compliance with the requirements of the specification.

3.01.03 Provisions included in the specification will not be limitative to the scope of work.

3.01.04 Bidder shall provide for any further activities which will improve the quality & performance of the system offered.

a) Tentative equipment type & location of Wireless System is listed in the specification document.Based on project requirement the quantities required shall be supplied by the Bidder and detailed information and quantities shall be furnished by the Bidder during detailed engineering for Owner’s review.

b) Bidder shall indicate the unit price for each type and size of equipment / items

3.01.05 Necessary information about the financial and technical resources, organization and experience to undertake the manufacturing and supply of such equipment shall be supplied by Bidder as an evidence of his capability for satisfaction of the Owner. Bidder shall submit along with his Bid a list of major contracts of supply and erection of similar equipment already executed or under execution, giving detailed particulars such as equipment rating, contract value, name of the Owner, year of supply etc.

3.02.00 **INCLUSION IN SUPPLY**

3.02.01 The supply of equipment and materials shall include but not be limited to :

a) Eight no. of VHF/UHF Base Station equipment complete with PSU, omni directional antenna, ~~desktop microphone~~ and RF coaxial cable and connectors for overall master control station and five group control station for five operational groups.

b) Fifty nos VHF/UHF Hand held portable set (Walkie Talkie sets complete with rechargeable Ni-Mh battery and battery charger.

c) Power Supply Unit for Base Station of adequate rating with one hour Nickel – cadmium battery back up including distribution boards etc.

d) RF Coaxial Cables, Wires, RF Connectors, BNC-UHF Adaptors, termination / connection accessories.

e) Conduits and accessories, junction boxes, terminal blocks, sockets, antenna fixing clamps and fixtures etc except any structure for hoisting antenna which shall be arranged by the Owner.

f) Grounding materials and connections.

g) All fittings, supports, brackets, clamps and connectors.

h) Mandatory spares as specified.

i) Erection / commissioning spares.

j) Consumables.

k) Special Tools & Tackle and test equipment.

l) Elarthing as required

m) The items not mentioned but required for successful completion and guarantee run of the project / system including modification, addition in existing system shall be in the scope of the tenderer

3.03.00 **SCOPE OF SERVICE**

Following service shall be provided by Bidder for equipment & systems supplied under this specification. However, Bidder has to provide the services required for completeness and correctness of the system irrespective of whether it is mentioned in the specification or not:-

01. Manufacture of all items as per requirement of specification, assembly etc.

02. System Engineering, ~~provision of software etc.~~ Carrying out detail engineering, preparation and submission of all drawings as specified elsewhere in this specification including preparation and submission of area wise bill of materials, layout and erection drawings showing installation of all

system equipment and components, antenna, cable tray/rack and conduit routing. The Plot Plan shall be referred in this regard

03. Installation and Commissioning of the Wireless Communication system establishing reliable and satisfactory level of quality of service including laying of the cables, furnishing of all labor, skilled and unskilled, supervisory personnel, erection tools and tackles, testing equipment, implements, supplies, consumables & hardware and transport for timely and efficient execution of the contract work. The Plot Plan shall be studied for estimation of cable etc for the system. Training to be provided to personnel for maintenance

04. Furnishing drawings, documents, data sheets, manuals/catalogs as specified

05. Inspection and testing at Bidder's works as per the Quality Assurance Plan

06. Packing and forwarding of all equipment included under this specification.

07. Erection, Installation and commissioning, site testing of equipment supplied under this specification.

08. Laying & Termination of signal, power and grounding cables, rproviding earthing of the system and equipment as specified.

09. Establish the specified interfaces and demonstrate operation.

10. Bidder will, during the time of detail engineering and installation of the quoted system, interact and coordinate with any other agency regarding collection/retrieval of inputs/information/data and all such works shall be under the scope of this Bidder. If necessary, the Bidder shall contact the Owner before submission of their quotation.

11. Project management and scheduling including micro-planning in specific work area and reporting progress periodically.

12. Site modification and preparation of "as-built" documentation".

13. Prepare "Handing Over" protocol and hand over system to Owner.

14. Securing certification from relevant authorities, wherever applicable.

15. Project management and scheduling including micro-planning in specific work area and reporting progress periodically.

3.04.00 **SCOPE OF DOCUMENTATION**

01. Prepare work definition and interfacing requirements of all system components.

02. Provide system design documentation.

03. Provide all commissioning and test procedures.

04. Provide inspection, commissioning and test procedures for Owne's approval.

05. Operating & service manuals and handbooks.

06. Tag all equipment as per Project Specification Project Procedure.

3.05.00 **ADDITION / DELETION CRITERIA**

The Bidder shall provide all equipment/system/services to meet the functional and parametric requirement of specification including all hardware/software as applicable. However, in case there is any addition / deletion from the specification requirement , necessary price adjustments, can be done on the price based on unit adjustment rates for each item as quoted by the Bidder. Accordinly , the Bidder shall quote unit price of the items quoted by him.

4.00.00 PERFORMANCE GUARANTEE

4.00.01 The Systems / Equipment to be supplied under this specification shall meet the guaranteed performance specified in the enclosed data sheet, specification sheet and technical attachment sheet when operating at the rated / specified conditions. The acceptance of the System / Equipment shall be subject to satisfying these parameters during shop test at Bidder's works and / or at site installation in complete assembled condition.

4.00.02 Performance figures quoted by Bidder shall be guaranteed within the tolerance permitted by relevant standards. In case of failure of the equipment to meet the guarantee, the equipment may be liable for rejection or the decline in performance from the guaranteed performance figures will be rectified by the Bidder without any extra cost.

5.00.00 WORK SCHEDULE

5.00.01 Bidder shall ensure that the delivery of Equipment and accessories shall meet the project schedule. The Project schedule / Work schedule shall be furnished to Bidders during issuing of Bid documents.

5.00.02 Bidder shall indicate the phase-wise design, engineering, manufacturing, testing, delivery for the complete package in the form of a bar-chart to match with the project schedule.

5.00.03 On finalization of the Contract, a detail supply programme for manufacture shall be furnished by Bidder for approval and will subsequently form a part of contract document.

5.00.04 Technical documentation such as Data Sheets, Quality Plan & Drawings are required to be submitted within three weeks of issuance of LOI to Bidder.

5.00.05 Modality of approval of technical documentation and priority of supply shall be mutually discussed and agreed upon with Bidder in the kick-off meeting after the placement of LOI.

6.00.00 REFERENCE DOCUMENTS' CODES AND STANDARDS

6.00.01 The entire system and accessories materials shall conform to the requirements of the latest issues and most recent revisions and amendments of the standards listed below and to the local laws and regulations applicable to the Project.

6.00.02 This Specification shall be read in conjunction with material Standards, codes, practices and regulations.

6.00.03 Following non-exhaustive list of specific codes and standards shall apply to the all cables and accessories provided in response to this Specification. Mandatory regulations cannot be superseded by this specification.

6.01.00 GENERAL CODES AND STANDARDS

6.01.01 Materials shall be designed, manufactured and tested in accordance with the latest applicable Indian Standards (IS), IEC and other internationally recognized standard except where modified and/or supplemented by this specification. Performance figures quoted shall be guaranteed within the tolerance permitted by relevant standards. In case of failure of the equipment to meet the guarantee, the equipment may be liable for rejection.

6.01.02 It shall be Bidder's responsibility to comply with the requirements of all Codes and Standards which are applicable to meet the Specification.

6.01.03 The following Codes and Standards form a part of the Specification:

- ANSI : American National Standards Institute
- BS : British Standards
- CCITT : Consutative Committe on Telephone and Telegraph
- EIA : Electronics Industry Association
- FM : Factory Mutual
- IEC : International Electrotechnical Commission
- IEEE : Institute of Electrical and Electronic Engineering
- IS : Indian Standard
- ISA : Instrument Society of America
- ISO : International Standards Organisation
- ITU : International Telecommunication Union
- NEC : National Electrical code
- NEMA : National Electrical Manufacturers Association

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- ANSI S3.5 Methods for the Calculation of the Speech Intelligibility Index

BRITISH STANDARDS (BS)

- BS EN 60268-5 : 2003 Sound system equipment, Loudspeakers.

- BS EN 6840-13 : 1998 Sound system equipment. Listening tests on Loudspeakers.
- BS 6840-14 : 1987 Sound system equipment. Guide for circular and elliptical Loudspeakers; outer fram diameters and mounting dimensions.
- BS 8473 :2006+A1:2008 Intruder and hold-up alarm systems. Management of false alarms. Code of practice.

INDIAN STANDARD (IS)

- IS-5 Colour for ready mixed paints and enamels.
- IS-694 PVC insulated cables for working voltages upto and including 1100 V.
- IS-1554 PVC insulated electric cables.
- IS-2147 Degree of protection provided by enclosures for low voltage switchgear and controlgear.
- IS-3961 Recomended current ratings for cables.
- IS-3975 Mild steel wires, formed wires and tapes for armouring of cables.
- IS-5831 PVC insulation and sheath of electric cables.
- IS-7741 Specification for Loudspeakers.
- IS-8130 Conductors for insulated electric cables and flexible cords.
- IS-9302 Characteristics and methods of measurements for sound system equipment.
- IS-9537 Conduits for electrical installations.
- IS-10426 Specification for public address amplifiers.
- IS-10918 Vented type nickel cadmium batteries.

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)

- IEC 60268-5 Ed.3.1 en:2007 Sound System Equipment – Part 5: Loudspeakers.
- IEC 60529 Classification of Degrees of Protection Provided by Enclosures (IP Code)
- IEC 60839-5-2 ed. 1.0 b:1991 Alarm Systems Part 5 Requirements for alarm transmission systems.
- IEC 61000 (All Parts) Electromagnetic Compatability (EMC)

The edition or revision of the Codes and Standards shall be the edition current at the date of the Contract.

6.02.00 **DISCREPANCIES**

6.02.01 In case of discrepancies between the technical requirements and other applicable Engineering Standards, Materials System Specifications, Standard Drawings, or

industry standards, codes, and forms shall be resolved in writing by Bidder with the employer. Before starting the manufacturing / supply, Bidder shall inform employer of any discrepancy between the instructions of the present specification and Bidder's standard.

6.02.02 It shall be the responsibility of Bidder to determine and comply with the statutory regulation (i.e. city, state, national, provincial, etc. codes or ordinances) which will apply in the location where the item is to be installed. Mandatory regulations cannot be superseded by this specification.

7.00.00 PROJECT INFORMATION

7.00.01 Environment specified as 'Indoor' shall be air-conditioned, where mentioned, having temperature between 20-25 degrees C and RH of about 40%. Outdoor location shall follow 'site condition' data.

7.00.02 All outdoor equipment shall be exposed to high humidity & oil/water vapour, coal dust and fly ash laden environment, vibration and electromagnetic interference generally encountered in similar industrial environment.

7.00.03 All outdoor equipments shall be mechanically or environmentally protect with sunshade or canopy wherever necessary.

7.00.04 For further details Lead Specification Volume-IIA shall be referred

8.00.00 TECHNICAL DESCRIPTION

8.01.00 GENERAL REQUIREMENTS

8.01.01 The Wireless Communication system shall be designed in accordance with the following criteria.

a) The system provides for quick and reliable communication between plant personnel located in different areas.

b) The system shall operate on phase/frequency modulation in the frequency band 136-174Mhz / 435-490Mhz.

c) The system will be installed and used in an adverse industrial environment. Equipment in some areas will be subject to vibration, coal dust, fly-ash, oil/water vapors as prevalent in thermal generating plant.

d) The design shall be such as to provide highly intelligible voice communication even in areas of high background noise (50 db to 100 db).

e) The wireless communication will be based on single frequency simplex operation.

8.02.00 SYSTEM DESCRIPTION

8.02.01 The system shall comprise Five (5) nos. separate and independent groups and one (1) overall Master Control Station of communication systems . Each group

shall have five (5) nos of Hand Portable set and one (1) no. of Base Station at its control point location. Actual distribution plan may change during detail engineering stage. The locations and quantities shall be approved by the Owner/Owner's Consultant during detailed engineering stage. Salient features of the plan are as under :

GROUP	SERVICE	LOCATION
Group #1	unit # 12-Boiler	Control Equipment Room Unit#12
Group #2	unit # 12-Turbine	Control Equipment Room Unit#12
Group #3	Common Services and Plant Water System	Service Building
Group #4	Coal Handling Plant (CHP)	CHP Control Building
Group #5	Switchyard	Switchyard Control Room
Overall Master Control Station	Overall Supervision	Communication Room at Common Control Building

8.02.02 Each group shall have one (1) Group Master Control Base station and a five (5) number of subscriber hand portable. Each base station shall can call and converse with any portable set in its group over a single frequency simplex operation Under normal circumstances, portable sets will not directly converse with each other but will be under the control of their Group Master base station. The group master base station will be able to communicate with other Group Master base stations over a separate frequency.

8.02.03 In addition, there shall be one (1) Overall Master control Base Station for the entire network, interconnecting all the Group Master Control Base Stations. These Master control Base Stations and Overall Master Control Base Station shall be able to call and converse with one another over a separate channel frequency.

8.02.04 Under emergency situations, broadcast calls shall be possible by any group master base station to a given group of portables or to all sets. Under normal situation, the communication between base station and portables in a group will not be heard in other sets in the same group. SELCAL signaling shall be used for this purpose in the portable and base stations.

8.02.05 The wireless communication shall be simplex (single frequency direct). The communication shall be inter group (Bases station –Base station) and intra group (Base station –Portable).

8.02.06 Inter group communication shall be limited to group master base stations only under normal circumstances. This inter group communication shall be on a separate channel, different from intra group channel frequency. In emergency, this channel will be used as a broadcast channel for all base and portable sets over the entire network.

8.02.07 Power supply to base stations and battery chargers of the portable sets shall be from UPS of adequate rating with half an hour back up capacity,.

8.03.00 **WIRELESS COMMUNICATION SYSTEM OPERATION**

8.03.01 **Communication Within a Group**

a) To originate a call within a group, the caller Portable shall transmit the code of the Group Master base station.

b) A call attention tone shall be heard over the other loudspeaker of the called set.

c) The called base station shall acknowledge the call and communicate with the calling party over a simplex frequency in the designated channel. The other group members shall have a channel busy indication in their sets. On completion of the conversation, channel busy indication shall be over and the other member can initiate their call.

d) For inter group communication between group master base stations and overall group master base station, a separate channel frequency shall be used. The portable sets between two separate groups shall not be able to talk to each other. In the event of such communication, they will inform their respective group master base stations and the message can be manually conveyed by the respective group masters.

8.04.00 **POWER SUPPLY**

8.04.01 Power Supply Unit of adequate rating with one hour back up capacity shall provide the power supply to the base station of the portable sets. UPS supply shall be provided to the Power Supply Unit of Base Station and Battery Charger of the Portable set.

8.04.02 Whenever any equipment is operating at voltage level other than 240V AC, the required conversion hardware compatible with specified power supply will be provided.

8.05.00 **ANTENNA SYSTEM**

8.05.01 The base station shall be connected to high gain omni-directional antenna for simplex operation.The antenna shall be installed over a suitable structure at a height of 20 to 30 meter from the ground level at other locations within the plant.

8.05.02 The vehicular mobile shall have omni directional mobile antenna which shall be installed on the body of the vehicle.

8.06.00 **WIRELESS COMMUNICATION SYSTEM CABLES**

8.06.01 Low loss coaxial cable type RG-8 shall be used for connecting the radio base station to antenna.

8.06.02 All required cable trays, junction boxes, earth wire and other accessories like standard brackets, nut-bolts, glands, lugs, conduit sleeves, etc., will be required.

8.07.00 **SPECIFIC REQUIREMENTS FOR EQUIPMENT**

8.07.01 Equipment shall be sturdy, impact resistant, dust and damp-proof, generally conforming to IP-54. Equipment for outdoor use shall be weatherproof type, conforming to IPW-55.

8.07.02 The portable and base station shall operate over 136-174 MHz435-490 MHz frequency band. The frequency generation shall be synthesized and programmable.

8.07.03 The portable handset shall have a switchable transmitter power output between 5 watt and 1 watt.

8.07.04 The portable sets and base sets shall have modulation characteristic of 16K0F3E (for 25 KHz channel spacing) or 10K0F3E (for 12.5 KHz channel spacing).

8.07.05 The transmitter output of base station shall be 25 /40 watt.

8.07.06 The receiver sensitivity of the sets shall be 0.25Uv for 12 Db SINAD.

8.08.00 **GROUNDING**

8.08.01 All metal enclosures, conduits shall be grounded in compliance with I.E. rules.

8.08.02 Earthing pits shall be provided for equipment and cable grounding and # 8 SWG G.I. wires shall be run from these pits for grounding.

8.09.00 **CABLE/WIRING**

8.09.01 Cable shall be generally laid on ladder type trays, available in trenches or within buildings, and clamped at an interval of 300mm.

8.09.02 When such trays are not available, arrangements shall be made by drawing the cables through conduits fixed along wall/column or bottom floor slab.

9.00.00 TECHNICAL DATA OF BASE STATION, PORTABLE AND OTHER ACCESSORIES

9.01.00 **PORTABLE SET**

GENERAL	VHF		UHF	
Frequency Range	136-174 MHz		403-440 MHz, 435-480 MHz	
Channels	16 or more			
Operating Temperature Range	-30° C to +60° C (Radio) -20° C to +60° C (with NiMH Battery)			
Weight Standard Capacity NiMH	350 g nominal			
Average Battery Life @ 5 – 5 – 90 Duty Cycle	**High Power** 5W	**Low Power** 1W	**High Power** 4W	**Low Power** 1W

GENERAL	VHF		UHF	
Standard Capacity NiMH	> 8 hours	> 1 hours	> 8 hours	> 8 hours
Sealing	Passes rain testing per IP x 4 (EN60529 : 1991)			
Shock & Vibration	Diecast with impact resistant polycarbonate housing, passes EIA RS – 316B			
Dust & Humidity	Weather resistant housing passes EIA RS – 316B			
Display digits with backlight	12			
Transmitter	**VHF**		**UHF**	
RF Output	**High Power** 5W	**Low Power** 1W	**High Power** 4W	**Low Power** 1W
Channel Spacing	12.5 / 25 kHz			
Frequency Stability	±2.5 ppm			
Modulation Limiting	± 5 kHz (25 kHz); ± 2.5 kHz (12.5 kHz)			
Audio Response (from 6 dB / oct. Pre-Emphasis, 300 to 3000 Hz)	+1, -3 dB			
Audio Distortion @ 1 kHz tone, 60% rated max. dev.	<5%			
FM Hum & Noise	40 dB			
Receiver	**VHF**		**UHF**	
Channel Spacing	**High Power** 25 kHz	**Low Power** 12.5 kHz	**High Power** 25 kHz	**Low Power** 12.5 kHz
Sensitivity (12 dB SINAD)	0.25 µV			
Audio Distortion	<5%			
Hum and Noise	40 dB			
Audio Output @ <5% Distortion (7.5 V / room temperature)	500 mW into 24Ω			

9.01.01 **System Features**

a) Full Band coverage.

b) 12 digit alpha numeric display.

c) Busy Channel Lockout.

d) Low Battery Alert.

f) Coded squelch.

g) Channel Scan & Priority Scan.

h) Selective Call Signalling.

i) Time Out Timer

j) Busy Channel Lockout

k) To be complete with battery, detachable belt clip and Helical Antenna

k) Single position Battery Charger, operable from 220v,50Hz input

l) Adjustable Transmitter Power level.

9.02.00 **BASE STATION**

GENERAL	**VHF**		**UHF**	
Frequency Range	136-174 MHz		403-480 MHz,	
Channels	16 or more			
Operating Temperature Range	-30° C to +60° C (Radio)			
Weight	1800 g nominal without Power Supply Unit			
Sealing	Passes rain testing per IP x 4 (EN60529 : 1991)			
Shock & Vibration	Diecast with impact resistant polycarbonate housing, passes EIA RS – 316B			
Dust & Humidity	Weather resistant housing passes EIA RS – 316B			
Display digits with backlight	8			
Transmitter	**VHF**		**UHF**	
RF Output	**High Power** 40W	**Low Power** **25W**	**High Power** 40W	**Low Power** 25W
Channel Spacing	12.5 / 25 kHz			
Frequency Stability	±2.5 ppm			
Modulation Limiting	± 5 kHz (25 kHz); ± 2.5 kHz (12.5 kHz)			
Adjacent Channel Power	60 dB			
Conducted/Radiated Emission	-36 dBm < 1 GHz -30 dBm > 1 GHz			

GENERAL	VHF		UHF	
Audio Response (from 6 dB/oct. Pre-Emphasis, 300 to 3000 Hz)	+1, -3 dB			
Audio Distortion @ 1 kHz tone, 60% rated max. dev.	<3%			
FM Hum & Noise	40 dB			
Receiver	**VHF**		**UHF**	
Channel Spacing	**High Power** 25 kHz	**Low Power** 12.5 kHz	**High Power** 25 kHz	**Low Power** 12.5 kHz
Sensitivity (12 dB SINAD)	0.25 µV			
Adjacent Channel Selectivity	70 dB			
Conducted Spurious Emission	-57 dBm < 1GHz -47 dBm > 1GHz			
Audio Distortion	<3%			
Hum and Noise	40 dB			
Audio Output @ <3% Distortion	4W into 4Ω			

. FCBC - Power Supply

a) Power requirements at 415V : KVA.
(To be decided by Bidder)

b) Type of Battery for Emergency supply : 24V/ AH (maintenance free)
(To be decided by Bidder)

9.02.01 **System Features**

a) Full Band coverage.

b) 12 digit alpha numeric display.

c) Busy Channel Lockout.

d) Low Battery Alert.

f) Coded squelch.

g) Channel Scan & Priority Scan.

h) Selective Call Signalling.

i) Time Out Timer

j) Busy Channel Lockout

k) Single position Battery Charger, operable from 220v,50Hz input

l) Adjustable Transmitter Power level.

j) Lights Activation

k) Call Alert

l) Auto acknowledgement and Automatic Number Identification

m) To be complete with Power Supply Unit –Input:230Volt,50Hz AC,Output:12 Volt, 10 Amp, DC, Omnidirectional Antenna, RF low loss coaxial cable type RG8, Loud speaker, Desktop Microphone, Power Supply Cable

9.03.00 **OMNI DIRECTIONAL ANTENNA**

SL. NO.	PARAMETER	VALUE
01.	Channel Frequency	VHF/UHF
02.	Impedance (Ohms)	50
03.	VSWR	1.5:1
04.	Input Termination	N type Female
05.	Bandwidth (MHz.)	4 MHz (VHF) / 25 MHz (UHF)
06.	Polarization	Vertical
07.	Radiation Pattern	Omni
08.	RF Power Handling Capacity (Watts)	250
09.	Wind Rating (KMPH)	200

9.04.00 **RF COAXIAL CABLE TYPE RG8**

SL. NO.	PARAMETER	VALUE
01.	AWG Stranding Material	10
02.	Impedance (Ohms/Km)	3.5
03.	Characteristic Impedance (Ohms)	50
04.	Core Dielectric Material	Solid PE

05.	Jacket Material	Black PVC
06.	Overall Nominal Diameter (mm)	10.3
07.	Nominal Inductance µH/m	0.2
08.	Nominal Capacitance @ 1KHz pF/m	82
09.	Nominal Attentuation db/100' (db/100m) @MHz	0,4 @ 5.00/ 0,5 @ 10.0/ 1,0 @ 50.0 /1,4 @ 100.0/ 1,8 @ 200.0 /2,6 @ 400.0/3,6@700
10.	(RMS) Max Operating Voltage	4000

9.05.00 **BATTERY & CHARGER**

01.	Make & Type	:	
02.	AH capacity	:	AH To be decided by the Bidder
03.	DC voltage	:	24V
04.	Charger	:	Float cum Boost
05.	Rating	:	24V / A To be decided by the Bidder
06.	Battery Back up	:	10 Hours at 100% load

10.00.00 SPECIFIC REQUIREMENTS - SUPPLY

10.01.00 RADIO SETS

Radio sets shall be compact and rugged. The shall have required degree of protection

10.01.01 RF Coaxial Cable shall have inner conductor of stranded / solid construction, insulated with PE. Outer conductor shall be in the form of braiding. The cable shall be overall PVC sheathed. The center conductor shall be wrapped with PE thread, covered with solid PE tube.

10.02.00 CONDUITS

10.02.01 Conduits shall be rigid steel, hot dip galvanized, minimum size of conduits shall be limited to 20 mm.

10.02.02 Each standard length (5M) of conduit shall be threaded at both ends.

10.02.03 Each piece of conduit shall be straight, free from blister and other defects and covered with capped bushing at both ends.

10.02.04 Conduits shall be sized so that conduit fill (ratio of total cable area to conduit area) shall not exceed the following :

- One cable : 53%
- Two cable : 31%
- Three cables & up : 40%

10.02.05 Conduit runs shall be provided with necessary bends as required.

10.02.06 Flexible conduits shall be made with bright, cold rolled annealed and electro-galvanized mild steel strips and coated with PVC.

10.03.00 NAMEPLATE

Nameplates shall be furnished for identification of devices and circuits. All switches, controls and indications shall be permanently and legibly marked in English as to their functions.

10.04.00 TROPICAL PROTECTION

10.04.01 All equipment, accessories and wiring shall have fungus protection, involving special treatment of insulation and metal against fungus, insects and corrosion.

10.04.02 Screens of corrosion resistant material shall be furnished on all ventilating louvers to prevent the entrance of insects.

10.05.00 PAINTING

10.05.01 All steel surfaces of all equipment enclosures shall be sand blasted, grounded and pickled as required to produce a smooth, clean surface free of scale, grease & rust.

10.05.02 After cleaning, the surfaces shall be given a phosphate coating followed by two coats of high quality primer and stoved after each coat.

10.05.03 Equipment enclosures shall then be finished with two coats of synthetic enamel paint of approved shade. For the battery charger enclosure, the synthetic enamel paint shall be of light grey shade (IS shade # 631).

10.05.04 Sufficient quantity of touch-up paint shall be furnished for application at site.

10.06.00 **SAMPLES**

10.06.01 Owner reserves the right to call for samples if considered necessary and the same shall be submitted by the Bidder free and without any obligation.

11.00.00 ERECTION & COMMISSIONING

Bidder's scope of work shall include the erection and commissioning of the entire system offered. Bidder shall include all erection materials, consumables etc for the purpose. Bidder shall arrange all erection tools, tackle and calibration instruments.

11.01.00 **INCLUSION IN ERECTION SUPPLY & WORKS**

11.01.01 Supply of erection hardware with all accessories as specified herein.

a) Erection of equipment with all erection material & accessories

b) Cabling works as specified.

c) Pre-commissioning activity, loop checking, calibration & testing

d) Provide supervision of all above activities.

e) Supply of consumables

f) Supply of erection/commissioning spares.

g) Providing all necessary Tools & Tackle

h) Painting with anticorrosive paint wherever required.

i) Commissioning.

11.02.00 **SCOPE OF ERECTION SERVICE**

01. Keep calibration records.

02. Maintaining proper documentation & handing over to Owner.

03. Create defect records and insurance claim documentation.

11.03.00 **TECHNICAL SPECIFICATION OF ERECTION HARDWARE**

a) This section provides the general technical requirements for the erection hardware to be supplied under this package.

b) All erection materials shall be of good quality and conform to the operating environment of the plant.

11.04.00 **GENERAL GUIDELINES & PRACTICE FOR ERECTION**

. Erection procedure shall follow sound engineering practice thouout and shall not cause hinderance to the activities of other Bidders at the work site. The sequence of work activities shall follow logical sequence and shall be based on work-front availability.

11.05.00 **CABLING / WIRING**

11.05.01 In the cases of installation of Omni directional antenna and laying of coaxial cable type RG8, the antenna shall be installed on top of a suitable structure, man-made or fabricated so that the top of the antenna attains a height of minimum 20 meters from the ground level. The coaxial cable shall be connected to the antenna feed point and laid suitably over cable tray through conduit and routed to the respective base station. The antenna supporting clamps etc shall be provided by the Vendor. However, the fabrication and supply of any antenna mast do not come under the scope of the Vendor. The Vendor shall provide a GI pipe of outer diameter 2 inches for fixation of antenna.

11.05.02 For coaxial cables run through conduits, the cables shall be drawn through conduits fixed along wall/column. Conduits shall be installed as per relevant IS code. Conduit supports shall be provided in the conduit runs at an interval of 1000 mm for horizontal runs and 750 mm for vertical runs. All conduits, junction/pull boxes shall securely fixed and grounded.

11.05.03 For coaxial cables laid directly buried underground, the telephone cables shall be laid by excavating trench in normal soil up to a depth of 1 m unless otherwise specified, providing 75 mm of sand or riddle earth both above and below cable, providing precast concrete slab on top and bricks on sides for cable protection against damage and back filling. The precast concrete slabs on top as specified above shall be marked "Telephone Cable".

12.00.00 DOCUMENTATION

12.00.01 Details of documentation to be supplied as part of the System shall be submitted to Owner for approval prior to execution of the contract.

12.00.02 Each documentation deliverable shall be an integral part of Bidder's Project schedule and shall be identified by date for delivery.

12.00.03 All documentation shall be in the English language.

12.00.04 The following data shall be shown on all documents and/or drawings :

- Name of Bidder / Bidder

- Correct and complete designation of the document
- Exact indication of the scale employed
- Revision Index and type of revision
- Name of the site.

12.00.05 Bidder shall supply final approved sets of documentation in hard copy and soft copies on DVD.

12.00.06 Bidder shall provide the signature and seal on the each and every pages of this specification along with their offer for the confirmation to all the clauses. Along with submit deviation/clarification list if any in given format.

12.00.07 Final Documentation shall be assembled as per Owner's instructions for collation of Dossiers.

12.00.08 Following sections detail the minimum set of documentation that shall be supplied with the System.

12.01.00 **OPERATION & MAINTENANCE DRAWINGS AND DOCUMENTATION**

12.01.01 The O&M Drawings and Documentation shall typically include the following items:

- Assembly drawings.
- Parts list and drawings with manufacturer's identification codes.
- Accessories list and drawings with manufacturer's identification codes.
- O&M schedules.
- Maintenance guidelines including lapping instructions.
- Troubleshooting guides.

12.01.02 The documents shall be submitted in the form of handy, hard bound books which can be easily handled and transported to site.

SL. NO.	DOCUMENT TYPE
1	Supply Document List
2	Supply Program
3	Data Sheets
4	System Architecture Drawing
5	Constructive equipment drawings
6	Technical Specifications (catalogues, assembly and erection specifications)
	Details of Panel and Installation
	Erection /Installation Drawing
	Equipment Layout Drawing in buildings / locations
	Wiring Diagram of Panel

SL. NO.	DOCUMENT TYPE
	Cable Route Layout Drawing
	Power Distribution Scheme Diagram
	Cable schedule
7	Test certificates
8	Compliance certificates
9	Quality Control Plan
10	Test procedures
11	Start-up, Recommended and mandatory spare parts List
12	Tools and tackle & consumable list
13	Operation and maintenance manuals
14	Final vesion of all drawings and documents furnished with the Bid.

12.02.00 **AS-BUILT DRAWINGS**

Upon completion of the final acceptance of the System by Owner, all construction drawings shall be updated by Bidder to an as-built status to reflect the equipment and System configurations as actually installed.

13.00.00 TESTING

13.01.00 **FACTORY ACCEPTANCE TEST (FAT)**

13.01.01 Factory Acceptance Test procedure shall be prepared by Bidder alongwith Quality Asuurance Plan. The document shall be subject to Owner's approval.

13.01.02 All System equipment shall be tested in the factory prior to clearance for shipping. The FAT shall include individual equipment tests under fully assembled condition.

13.01.03 The FAT shall demonstrate adherence that the equipment meets the design standards and functional compliance. Duration of FAT at manufaturere's works shall be atleast two weeks.

13.01.04 One (1) month prior to the FAT, Bidder shall submit a test procedure to Owner for approval.

13.01.05 Owner's representative may, at Owner's sole discretion, attend the FAT. In this event, Bidder shall ensure all tests are carried out in the presence of Owner's personnel. If Owner declines to attend the FAT, Bidder shall carry out these tests and submit the results to Owner for review.

13.01.06 Factory Acceptance Tests (FATs) shall be documented with the results obtained and the success or failure of the test. The test results shall be submitted to Owner prior to clearance of the FAT and authority by Owner is given to ship.

13.02.00 **COMMISSIONING**

13.02.01 Bidder is responsible for delivering a fully functional equipment that meets all the requirements of the Specification and applicable standards.

13.02.02 The Commissioning processes will demonstrate the above to Owner, before handing over of the System.

13.02.03 System Commissioning shall comprise of a number of different activities culminating in the acceptance of the operational System by Owner. These activities are detailed in the following sections.

13.02.04 Bidder shall provide all necessary test equipment required to carry out the Commissioning and acceptance testing.

13.03.00 **SITE ACCEPTANCE TEST (SAT)**

13.03.01 Site acceptance test shall be performed by Bidder to verify the full operational functionality of the System.

13.03.02 Four weeks prior to the SAT Bidder shall submit a test procedure to Owner for approval.

13.03.03 All SAT tests shall be documented with the results obtained and their success or failure. These test results shall be submitted to Owner prior to clearance of the SAT and proceeding to the final performance tests.

14.00.00 MAINTENANCE REQUIREMENTS

14.01.00 **MAINTENANCE PHILOSOPHY**

14.01.01 Owner's maintenance philosophy is to undertake first line field repair by modular replacement. The module shall then be returned to the supplier, who shall either repair it or replace it during the warranty period.

15.00.00 SPARES, TOOLS, AND TEST EQUIPMENT

15.01.00 SPARES

15.01.01 Recommended Spares

a) Supply of spare parts as necessary and recommended by Bidder for three (3) years of reliable, trouble-free operation and maintenance of the items supplied under this specification.

b) List of such spares shall be supplied

c) Bidder shall also assume the responsibility of supplying all required spare parts that the plant may need for Equipment supplied under this specification for ten (10) years from the date of contract.

15.01.02 Mandatory (Contractual) Spares

Not Applicable

15.01.03 Start-Up and Commissioning Spares

a) Spares which may be required during tests, trial, commissioning and during guarantee run shall be arranged separately.

b) Spares which will be used for this purpose shall be replaced by the Bidder within reasonable period of time.

c) The cost of such spares shall be quoted separately. This may be ordered in part or on the whole.

15.02.00 GENERAL REQUIREMENTS OF SPARES

15.02.01 All spares required for operation/maintenance by the Owner shall be delivered in unused new condition.

15.02.02 Spares shall be interchangeable with the parts for which they are intended for replacement.

15.02.03 Bidder shall indicate the service expectancy period for equipment / parts under normal operating conditions after which replacement will be necessary.

15.02.04 Spares shall be properly packed for long term storage under the prevailing site condition and shall be clearly labelled for easy identification without uncrating. Any spare item having limited shelf life shall be clearly labelled for the expiry date beyond which it cannot be used.

15.02.05 Bidder shall inform the Owner, after having carried out the supply, if a component or part of an equipment will not be produced regularly any longer, specifying the new component or the material type which can be utilised in substitution.

15.02.06 Bidder's commitment in that case will be extended for a period of time which will not be lower than 10 years.

15.02.07 Any spare parts for the system used during the Warranty Period shall be replenished at the Bidder's expense.

15.02.08 Bidder shall provide ordering information to order consumable and spare parts as required. Information required is:

- Description of item
- Bidder 's reference number
- Standard quantities recommended for start-up and normal operation
- Spare Parts Interchangeability Records (SPIR) procedures.

15.03.00 **TOOLS & TACKLE**

15.03.01 Bidder, in his proposal, shall indicate a list of all tools and tackle which may be required for erection, maintenance, overhaul and replacement of equipment / component to be supplied under this specification.

15.03.02 List of such items shall be supplied in the form of the enclosed format along with unit price.

15.03.03 Order for such tools & tackle may be placed simultaneously or otherwise at the option of Owner.

15.03.04 The cost of tools and tackle shall be quoted separately. Tools and tackle may be ordered in part or on the whole.

16.00.00 CLEANING, PROTECTION AND PAINTING

16.00.01 All equipment shall be shipped in properly cleaned condition. All the equipment shall be thoroughly cleaned to remove mill scales, rust etc. and properly painted with anti rust primer, where applicable

16.00.02 Some of the equipment and accessories, after arrival at site, are likely to be in storage for long periods before they are taken up for erection. Bidder may provide adequate protection for preventing damage due to corrosion, dust / dirt ingress, ageing etc.

16.00.03 Plugs shall be provided at cable entry holes/adapters to avoid entry of dust and foreign particles. Paper cap will not be acceptable.

17.00.00 IDENTIFICATION, MARKING, PACKING AND STORING

17.00.01 Each equipment shall be individually packed, tagged and protected.

17.00.02 Inscription on equipment (labels) shall be in English.

17.00.03 Packing must be such to protect all goods from possible impacts and foreign matters; moreover, it must limit the influence of both the climate and the environment, and be suitable for the kind of shipping provided for.

17.00.04 In packing the equipment and accessories, all necessary precautions will have to be taken to avoid any damage during transport and delivery.

17.00.05 All items supplied shall be packed for long term storage under the climatic conditions prevailing at the site. Small items shall be packed in sealed transparent plastic bags with desiccator packs as necessary. Each item shall be clearly marked with its description, purpose and plant designation code as applicable. When more than one item is packed in a single case a general description of the contents is to be shown on the outside of each case and a detailed list enclosed. All cases and other packages must be suitably marked and numbered for identification purposes.

18.00.00 SHIPMENT

18.00.01 Bidder shall be responsible for ensuring that all equipment are carefully and/or suitably packed for shipment, so that they arrive at site in good condition and remain so during storage at site. Before despatch, all exposed surface shall be protected by applying anti rust primer (two coats) and suitable cover shall be provided for the equipment to be supplied.

18.00.02 Bidder will be responsible for all damages due to improper preparation of the goods for shipment

19.00.00 QUALITY ASSURANCE PLAN

19.00.01 Equipment supplied under this specification shall have assured quality and workmanship.

19.00.02 Bidder shall complete the Quality Control Plan with the information pertaining to him, in particular with the reference of the documents to be used.

19.00.03 The QCP completed by Bidder shall be submitted to employer for approval. The QAP matrix furnished hereunder is for guidence only .

19.00.04 Bidder shall carry out all the checks, tests and inspections required to verify the compliance of the supply with the specification requirements at his own expenses. Applicable test will be as per the ***Inspection and Test Plan (Refer Enclosure- A).***

19.00.05 If not specified otherwise in Contract, Bidder shall notify Owner, 10 (ten) complete working days in advance, that the equipment is ready for inspection. This notification shall include the following information :

- Bidder's Name/ address/ telephone and fax numbers
- Job / Subject, Purchase order number;
- Type / Serial No. / Tag No. / Model No.;

- List of parts to be tested;
- Type of inspection/test.....phase no.....of QCP no.....rev.....;
- Owner attendance;
- Place and date of the inspection;
- Quantity of available items;
- Expected duration;
- Bidder's reference person (name, phone, fax)

In case the inspection is performed without due notification, repetition of those tests may be requested at Bidder's expenses.

19.00.06 Owner and/or testing body's inspector shall have free access to Bidder's works both during manufacturing and tests & trials.

19.00.07 Bidder shall stand guarantee for perfect operation of the equipment during the period specified in the warranty.

19.00.08 Regardless of the results of the tests performed in Bidder's works, the final test will be performed at the plant, under actual operating conditions.

Bidder shall therefore undertake to replace, free of charge and within shortest time possible, all material which, in operating conditions, shall fail to comply with contractual requirements.

19.00.09 Bidder shall arrange the inspection and tests in easily accessible location and in properly illuminated shop to carry out the inspection in proper way.

Bidder shall, if called for, produce the necessary technical documents (drawings, specifications etc.) and copies of the codes or procedures applied to the execution of inspections and/or tests.

Owner reserves the right to reject the inspections and tests which fail to fulfil the above conditions.

19.00.10 Bidder shall perform inspections and tests in full compliance with industrial safety rules, to safeguard his own personnel as well as Owner's/ Consultant's Inspectors.

19.00.11 Bidder shall be responsible for the performance of the tests and shall :

a) provide qualified and specially skilled personnel

b) provide calibrated instruments with relevant certification

19.00.12 For Type or Special tests, Bidder shall indicate the location for carrying out the tests (Bidder's works or any recognized laboratory).

In case Owner is expected to give approval on the basis of certifications concerning similar previous supplies, Bidder shall submit for approval to Owner

the documentation demonstrating the compliance between the supply and the certified model.

19.00.13 If during the execution or at the end of the supply, any non-conformances are noted, Bidder shall implement and adequately document all the corrective actions necessary to restore the contractually required conditions. The documentation related to the corrective actions shall be included in the final certification report. If the non-conformance compromises the functional or safety feature of the equipment or specific interface elements, the supplier shall inform employer in advance in writing on the corrective actions he intend to implement. Empoyer has the right to reject (totally or partially) the proposed actions if considered inadequate or insufficient and Bidder may be asked for more adequate actions. The failure to communicate such non-conformances will be considered fraudulent intention.

19.00.14 During manufacture Bidder shall make available, the certificates concerning the inspections and tests performed. At the end, Bidder shall provide the certificates required for components for which a QCP has been developed. These certificates shall be kept in dossiers and shall comprise the documents concerning manufacturing, inspections and tests performed on the component and on its parts. The dossier shall be organised as follows:

- Cover sheet containing:
- Bidder's Name;
- Job and order number;
- Identification (model no. & serial no.) and short description of the supplied component;
- Date and Bidder 's signature;
- List of content;
- QCP (refer Enclosure- A);
- Certificates of materials, inspections and tests listed in the QCP;
- Non-conformance report (if any);
- Final Inspection Report. (Refer Enclosure- B)

All the pages shall be numbered.

19.00.15 The supply shall be considered completed if :

- ➝ the documents presented to Owner have been approved;
- ➝ the materials are in compliance with the specification; and related certificates are available and acceptable;
- ➝ the necessary qualification certificates are available and acceptable;
- ➝ the components have been inspected, examined and tested as required and related certificates are available and acceptable;
- ➝ the non-conformances have been documented and accepted by Owner;
- ➝ the components are clean, protected and identified;
- ➝ the necessary instructions for protection, handling or storage are available;

- the Final Inspection Report has been submitted.

19.00.16 Bidder shall prepare a QCP for each component or group of similar components.

- on sheets 1 and 2 of enclosure-A Bidder must indicate his identifying data and those concerning the order and the component for which the QCP is referred to;
- on sheet 3 of enclosure-A Bidder shall indicate the materials, parts and processes to be inspected, checked and tested and related tests and inspections to be executed.

Other types of forms may be accepted only if they contain the same information of Bidder.

19.00.17 The QCP prepared by Bidder shall be submitted to Owner for approval at least 15 days before the start of the related actives. Bidder shalll be authorised to proceed if the QCP has been approved.

19.00.18 General requirements for inspection shall be as per the following guidelines.

a) ***Non Destructive Tests*** **(NOT APPLICABLE)**

b) ***Tests***

- The materials, manufacturing and finished components shall be inspected, controlled and tested as defined in this paragraph in compliance with standard codes and technical specification that shall be subject Owner's approval.

c) ***Visual Inspections***

- Check of the supply (quantities, accessories, markings dimensions / examinations in compliance with relevant drawings);