



PPX-DABG DEPARTMENT
BHARAT HEAVY ELECTRICALS LIMITED
HEEP: HARDWAR-249 403 (Uttarakhand)
FAX: +91 1334 226462
TEL: +91 1334 285462
E-mail: chirag@bhel.in

Ref: PPX-DABG/EOI/25-26/08

Date: 18/10/2025

Notice Inviting Tender for empanelment of Indian manufacturers to manufacture control console PCBs (Printed Circuit Boards)

Bharat Heavy Electricals Limited (BHEL), a leading Central Public Sector Enterprise of Govt. of India company which is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing organizations in India, catering to the core infrastructure sectors of Indian economy viz. energy, transportation, industry, non-conventional energy and Defence. BHEL has been in the business for more than 60 years and has supplied more than half of power producing equipment installed in the country. Defence and Aerospace Business Group of Heavy Electrical Equipment Plant (HEEP), one of the major manufacturing units of BHEL located at Haridwar, Uttarakhand, is manufacturing Naval Guns for Indian Navy since 1994. **We are looking for reputed Indian manufacturers to manufacture control console PCBs (Printed Circuit Boards)**

The offers received will be technically evaluated by BHEL & successful shortlisted parties will be asked to submit their detailed Techno-Commercial offers through formal NIT/Enquiry, for our future requirements. Vendors shall confirm that there is no deviation with respect to BHEL Specifications. However, deviations, if any, are to be listed as a separate attachment. The offers that do not meet the substantial requirements of our specifications are liable to be ignored.

Documents as per Annexure -2 (enclosed) are to be necessarily filled and submitted along with the technical offer.

Only Technical BID is to be submitted along with the documents mentioned above. The envelope containing the offer shall be duly sealed and super scribed as "**To manufacture control console PCBs (Printed Circuit Boards) against Reference No. PPX-DABG/EOI/25-26/06, SUBMITTED BY (Name of company)"**.



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The last date for submission of Technical offers is **28/10/2025.** The Technical Offers complete in all respect must be addressed to

HEAD OF MATERIAL MANAGEMENT,
Heavy Electrical Equipment Plant,
Bharat Heavy Electricals Limited,
HARIDWAR-249403 (Uttarakhand), INDIA.

Technical offers should reach before 13:45 Hrs (IST) of closing date of NIT. Late offers will not be considered in any case. BHEL will not be responsible for any type of postal delay / incomplete information from vendor. For any further clarifications, feel free to contact the undersigned.

(Chirag Goel)
MANAGER (PPX-DABG)

Expression of Interest for Empanelment of Indian manufacturers to manufacture control console PCBs (Printed Circuit Boards)

Introduction:

This Expression of Interest (EOI) seeks response from prospective Indian vendors who are capable of manufacturing, assembly, testing and supply of PCBs assembly as per general standards of defence industry and are willing to associate with Bharat Heavy Electricals Limited (BHEL) – HEEP, Haridwar.

Bharat Heavy Electricals Limited (BHEL), is a Central Public Sector Enterprise of Govt. of India company which is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing organizations in India, catering to the core infrastructure sectors of Indian economy viz. energy, transportation, industry, non-conventional energy and Defence. BHEL has been in the business for more than 60 years and has supplied more than half of power producing equipment installed in the country.

Broad Scope:

Re-Designing of old/obsolete PCBs, Manufacturing, Assembly, Inspection & Testing, Packing & Supply of PCBs including material sourcing. Brief details and snap shots of PCBs assembly attached as **Annexure-1**.

BHEL presently intends to empanel the suitable Indian vendor for manufacturing these items as per the response received from vendors.

Interested Parties having prior experience of manufacturing of similar components & proven manufacturing and machining capabilities are requested to submit their response along with required documents (**Annexure-2**) latest by **28/10/2025**

1. Competencies/Experience and Facilities (In-house):

Vendors should have following minimum competencies, experience and in-house facilities:

Sl.	Competencies/Experience/Facilities
i.	Vendor must be a PCB designer & manufacturer.
ii.	Vendor must have re-design capabilities of old PCBs. Vendor should have experience of successfully executing such activity for any customer. (Vendor to submit relevant documentary evidence e.g. unpriced PO copy, test certificates, dispatch documents etc.)
iii.	Vendor must have manufactured, tested & successfully supplied minimum 12 layered PCB for defence application. (Vendor to submit relevant documents e.g. unpriced PO copy, routine test certificates, dispatch documents, drawings, BOM, data sheet etc. for verification of the above)
iv.	Vendor must have minimum following manufacturing & testing facilities (or superior) for the PCBs. (Vendor to submit the relevant documentary evidence & pictures of in-house manufacturing & testing facilities to prove compliance of the following) a) Vendor must have manufacturing capability to handle PCBs of size 300x300 (LxB) or more and thickness from 0.2mm to 6 mm. b) ISO Class 8 clean room production facility. c) ANSI ESD S20.20 certified facility.

	d) Selective soldering machine for PTH (Plated Through-Hole) soldering.
	e) Aqueous cleaning machine with 60°C heat curing.
	f) Selective robotic conformal coating machine.
	g) Reflow oven having minimum 10 heating zones, 3 cooling zones and equipped with Nitrogen system.
	h) 3D solder paste inspection machine.
	i) 3D X-Ray inspection machine.
	j) 3D AOI (Automated Optical Inspection) machine.
v.	All the above points are mandatory requirements. Offers of vendors not meeting these requirements will NOT be considered.

2. Minimum support from vendors for supply:

Vendor shall be capable to supply items and provide service support minimum for next 25 years.

3. Major Process / facilities that may be outsourced:

a) Bare PCB fabrication

4. **Final Acceptance of PCBs:** Subsequent to successfully conducting all the tests by vendor as per testing requirements (in-line with mutually agreed quality plan), PCBs will be accepted after satisfactory operation in BHEL's control console.

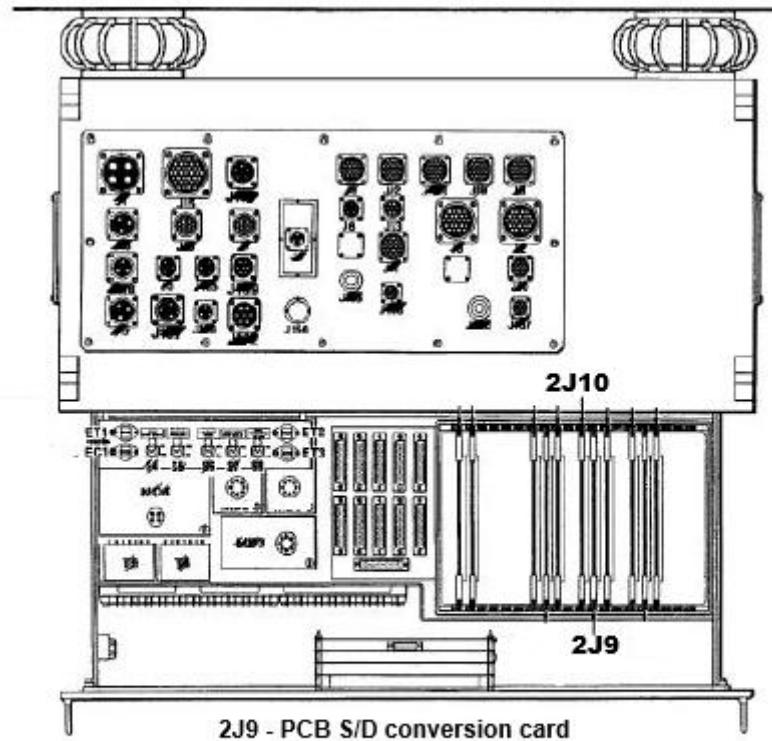
The prospective vendor will be required to sign Framework confidentiality agreement cum undertaking (FCA) & complete the Supplier Registration (online - <https://supplier.bhel.in/>), PMD category - Description "Components / Assemblies of SRGM for indigenisation & PMD no: DF128). The Supplier Registration Form (SRF) duly filled will be assessed for manufacturing capability, quality systems being followed, organizational soundness and financial worthiness.

In case any clarification is needed, parties may contact as per following details:

Chirag Goel
Manager/PPX
Defence and Aerospace Business Group,
Heavy Electrical Equipment Limited,
Bharat Heavy Electricals Limited (BHEL), Ranipur,
Haridwar, Uttarakhand.
LL: 01334-285462 Email id: chirag@bhel.in

PCBs

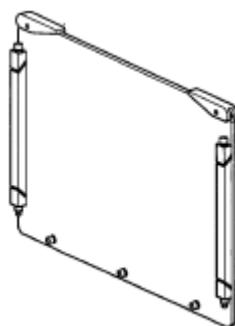
SN	PCB	PN/Drg
1.	PCB, S-D CONVERTER, 2J9	157681033
2.	PCB, A/D-D/A CONVERTER, 2J10	157681031



2J9 - PCB S/D conversion card

2J10- PCB A/D-D/A conversion card

(PCBs mounted in CoT console)



(Pictorial view of PCB)

Note: The drawings/documents of the PCBs shall be submitted after signing of Framework Confidentiality Agreement.

LIST OF DOCUMENTS

1. Organisational Information – Name and Correspondence Address of the Firm/ Company to be registered complete with contact number and email id.
2. Registration particulars – If registered with any of the BHEL Units
3. Manufacturing Facilities: List & details of facilities & equipments for designing, manufacturing, inspection & testing of PCBs. Documents as per clause-1 are to be submitted.
4. Experience related to design, manufacture & supply of PCBs. Documents as per clause-1 are to be submitted.
5. Standard Quality Plan
6. Quality Management System - Whether Supplier is ISO 9001, ISO 14000, OHSAS – 18000 Certified.
7. List of Enclosures (Brochures, Catalogues etc.)
8. Financial Information
9. Framework confidentiality agreement cum undertaking

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(To be executed on Non-judicial Stamp Paper for an appropriate value.
To be stamped as an agreement)

(For Suppliers on Unit's/Division's PMD)

Framework Confidentiality Agreement cum Undertaking

This Agreement made on this _____ day of (month) _____ 20____ ("Effective Date") by and between

M/s BHARAT HEAVY ELECTRICALS LIMITED, having registered office at "BHEL House", Siri Fort, New Delhi – 110049 (India), acting through its _____ Unit (hereinafter may be referred to as "BHEL" or "the Company").

And

M/s _____ (address) _____
 represented by authorized representative Sri _____ (herein after referred to as the "Supplier").

The Supplier and the Company may, unless the context otherwise requires, hereinafter be collectively referred to as "Parties" or singly as the "Party".

RECITALS

Whereas, BHEL is engaged in the design, engineering, manufacturing, construction, testing, commissioning and servicing of a wide range of products, systems and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable energy, Oil & Gas and Defence and providing associated services to varied customers in relation to which BHEL/its affiliates own valuable information of a secret and confidential nature.

Whereas the Company may, in connection with Contract(s) (as defined hereunder) placed or to be placed upon the Supplier, or otherwise, from time to time, make available, Technical Information as is defined hereunder.

And Whereas BHEL is willing to provide such Technical Information to the Supplier from time to time and the Supplier understands and acknowledges that such Technical Information is valuable for the Company and as such is willing to protect confidentiality of such information, subject to the terms and conditions set out hereunder.

Now therefore, in view of the foregoing premises and in consideration of the mutual covenants and agreements hereinafter set forth, the Parties agree as under:

1. Definitions:

Unless the context so requires, in this Agreement, the following terms will bear the meaning ascribed to the said term in this clause.

- A. **"Contract"** means the Contract entered into with a Supplier and includes a Purchase Order, or a Work Order for procurement of any goods or for provision of any services.
- B. **"Effective Date"** means the date of this Agreement as mentioned in the preamble of this Agreement.

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- C. **“Supplier”** includes a Contractor or a Vendor of the Company whether for supplying of goods or for providing any services under a Contract or both.
- D. **“Technical Information”** includes Drawings, and/or Product Standards and/or Specifications and/or Corporate / Plant Specifications and/or Technological Process Sheets and/or Technical Data Sheets and/or Jigs & Fixtures and/or Pattern & Dies and/or Special Gauges and/or Tools etc. belonging to or wherein the Company has acquired from a third party a right of user and includes any improvement thereto from time to time whether carried out by the Company or by the Supplier.
- E. **“Intended Purpose”** means the purpose for which the Technical Information is provided to the Supplier under or in connection with a Contract.
- F. **“Improvement”** includes any modification made to, or adaptation of, the Technical Information which enhances or is calculated to enhance the performance (whether in terms of effectiveness or in terms of efficiency or both) of the product and/or the service to be provided by the Supplier under a Contract.

2. This Agreement shall come into force/deemed to have come into force, as the case may be, on the Effective Date; or, on the first date when the Technical Information or any part thereof is provided by BHEL to the Supplier; whichever is earlier.

3. **Agreement deemed to be incorporated in each Contract:** Unless and to the extent otherwise stipulated in the Contract, the conditions of this Agreement are deemed to be incorporated in all Contracts which may be entered into between the Company and the Supplier. Further, unless otherwise stipulated, the obligations under this Agreement are and will be independent of the obligations under the Contracts and such obligations of the Supplier hereunder will remain of full effect and validity notwithstanding that the period of validity of the Contracts has expired by efflux of time stipulated therein; or, the contract has been discharged by performance or breach; or, the termination of the Contracts for any reason whatsoever.

4. Ownership:

4.1 The Company may, from time to time, make available to the Supplier, Technical Information on a non-exclusive basis by way of loan.

4.2 The Supplier acknowledges and agrees that all Technical Information and copies thereof that are or may be provided by the Company to the Supplier, are and shall remain the property of BHEL or that of the concerned entity from whom BHEL has obtained the Technical Information and such Technical Information are and shall constitute trade secrets of the BHEL. Nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the Supplier any patent, copyright or design or any other intellectual property rights of whatsoever description that subsists or may hereinafter exist in the Technical Information. Furthermore, nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the Supplier any license or rights of use of such patent, copyright or design or any other

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intellectual property rights of whatsoever description which may now or hereafter exist in the Technical Information except for use of the Technical Information strictly in accordance with this Agreement and the Contract and/or as directed in writing by the Company, solely for the Intended Purpose under the Contract.

4.3 Neither Party is obligated by or under this Agreement to purchase from or provide to the other Party any service or product and that any such purchase/sale of any product and/or service by one Party to the other Party will be governed by the Contract if any, that may be entered into by and between the Company and the Supplier.

4.4 The Supplier is/has been made well aware and acknowledges that the Technical Information being/which may be shared with it by the Company has been either generated by the Company by incurring huge investment and cost or obtained from foreign collaborators under Technical Collaboration Agreement (TCA) with stringent confidentiality conditions.

4.5 The Supplier agrees and undertakes to adhere to confidentiality requirements as applicable to BHEL under a TCA and also ensure that the confidentiality requirements are adhered to by all its concerned employees or sub-contractors/suppliers (where permitted to be engaged by BHEL). Any damages, losses, expenses of any description whatsoever, arising out of or in connection with a breach of the confidentiality requirements under a TCA owing to any act or omission on the part of the Supplier or its employees or sub-contractors/suppliers that is claimed by a foreign collaborator from the Company shall be wholly borne by the Supplier and it shall keep BHEL fully indemnified in this behalf. The demand by the Company shall be conclusive upon the Supplier who shall thereupon forthwith pay to the Company without demur, dispute or delay the amount as demanded without demanding any further proof thereof.

4.6 The Supplier agrees and undertakes that unless so decided and advised by the Company in writing all rights/title to any Improvement to the Technical Information shall vest in the Company. The Supplier undertakes and agrees to inform forthwith to the Company of any such Improvement made to the Technical Information and transfer all drawings/documents or other materials connected with such Improvement to the Company and also agrees to fully cooperate with the Company for protecting the Company's interests in such Improvement in the Technical Information including but not limited to obtaining necessary protection for the intellectual property rights in such improvement, if so desired by the Company. If a question arises whether a modification amounts to Improvement to the Technical Information, the same shall be decided by the Company and such decision shall be final and binding upon the Supplier.

5. Use and Non-Disclosure:

5.1 Unless otherwise stipulated by the Company, all Technical Information made available to the Supplier, by the Company shall be treated as Confidential irrespective of whether the same is marked or otherwise denoted to be Confidential or not.

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5.2 The Supplier undertakes and agrees that the Technical Information in its possession shall be held in strict confidence and will be used strictly in accordance with this Agreement and solely for the Intended Purpose under the Contract. Use of the Technical Information for any other purpose other than Intended Purpose is prohibited.

5.3 In particular, the Supplier shall not use Technical Information or any Improvement in its possession for the manufacture or procurement of the Product(s) or components or parts thereof or use the Technical Information or any portion thereof or any modification or adaptation thereof in any form to provide any product and/or service to any third party, without the prior written consent of the Company.

5.4 The Supplier shall not disclose any of such Technical Information to any third party without the prior written consent of the Company. The Supplier agrees that without prior written consent of the Company, the Supplier shall not disclose to a third party about the existence of this Agreement, or of the fact that it is/was in possession of or has experience in the use of any Technical Information nor shall the Supplier share in any manner whatsoever, with a third party, the name or details of any Contract(s) awarded by the Company to it or performed by the Supplier or the scope of work thereof or share any document or correspondence by and between the Company and the Supplier in or in connection with this Agreement or such Contract(s). Notwithstanding what is stated elsewhere, the overall responsibility of any breach of the confidentiality provisions under this Agreement shall rest with the Supplier.

5.5 The Supplier undertakes and agrees not to make copies or extracts of and not to disclose to others any or all of the Technical Information in its possession, except as follows:

- (a) The Supplier may disclose the Technical Information to such of its officers and employees strictly to the extent as is necessary for such officer or employee for the Intended Purpose, provided that the Confidential Information (or copies thereof) disclosed shall be marked clearly as the confidential and proprietary information of Company and that such officers and employees shall similarly be bound by undertakings of confidence, restricted use and non-disclosure in respect of the Technical Information. The Supplier shall be responsible for any breach of such confidentiality provisions by such officers and employees.
- (b) With the prior written consent of Company, the Supplier may disclose for the Intended Purpose such Technical Information as is provided for in such consent to such of its professional advisers: consultants, insurers and subcontractors who shall be similarly bound by undertakings of confidence, restricted use and non-disclosure in respect of such Technical Information.
- (c) The Supplier shall not be prevented to make any disclosure required by (i) order of a court of competent jurisdiction or (ii) any competent regulatory authority or agency where such disclosure is required by law, provided that where the Supplier

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intends to make such disclosure, it shall first consult Company and take all reasonable steps requested by it to minimize the extent of the Technical Information disclosed and to make such disclosure in confidence and also shall cooperate with the Company in seeking any protective order or any other remedy from proper authority in this matter.

6. Exceptions:

The obligations of the Supplier pursuant to the provisions of this agreement shall not apply to any Confidential Information that:

- a) was/is known to, or in the possession of the Supplier prior to disclosure thereof by the Company;
- b) is or becomes publicly known, otherwise than as a result of a breach of this agreement by the Supplier.
- c) is developed independently of the Disclosing Party by the Supplier in circumstances that do not amount to a breach of the provisions of this Agreement or the Contract;
- d) is received from a third party in circumstances that do not result in a breach of the provisions of this Agreement.

7. The obligation of maintaining confidentiality of the Technical Information on each occasion, shall subsist for the entire duration during which the Technical Information / equipment is in possession of the Supplier and shall thereafter subsist for a further period of ---- years from the date when the complete Technical Information has been returned to the Company and if Technical Information has been returned in portions on different dates then, the period of ---- years will be reckoned from the date when the last portion of the Technical Information has been returned. Notwithstanding the expiry of the confidentiality obligation, the obligation of the Supplier under clause 5.4 shall continue to subsist for a further period of ---- years.

8. Warranties & Undertakings:

a) The Supplier undertakes to ensure the due observance of the undertakings of confidence, restricted use and non-disclosure by its persons to whom it discloses or releases copies or extracts of the Technical Information.

b) The Supplier shall keep the Technical Information or improvement made therein properly segregated and not mix up the same with any other material/documents belonging to him/it or to any other third party.

c) The Supplier further undertakes that he/it shall not hypothecate or give on lease or otherwise alienate or do away with any of the Technical Information and/or equipment of the Company, made available to him/it, and undertakes that he/it shall hold the same as a trustee, in capacity of custodian thereof and use/utilise the same solely for the purpose of executing the Contract awarded by the Company.

d) The Supplier further undertakes that he/it shall return all the equipment and/or Technical Information as far as practicable in the same condition in which the same was made available to him/it by the Company together with any Improvement thereon and the documents connected with such Improvement, to the Company forthwith upon completion of the scope

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of work or Contract for which such Technical Information was provided by the Company to it or as directed by the Company together with a confirmation by way of an affidavit or in such manner as directed by the Company that it has not retained any equipment and/or Technical Information/Improvement thereof. In case any such equipment and/or Technical Information or Improvement thereof shall remain in his possession or is not capable of being returned, the retention and use of such Technical Information or Improvement thereto shall continue to be governed by this Agreement.

e) The Supplier undertakes to indemnify the Company for all the direct, indirect and/or consequential losses, damages, expenses whatsoever including any consequential loss of business, profits suffered by the Company owing to breach by the Supplier of its obligations under this Agreement and/or the confidentiality requirements, if any, contained in the Contract and that the Supplier hereby agrees that the decision of the Company in all such or any such matter/s shall be final and binding on the Supplier. On mere written demand of the Company, the Supplier shall forthwith and without demur or delay pay to the Company any such sum as determined by the Company as the amount of loss or damage or expense which has been suffered by the Company. The Supplier agrees that the Company shall be entitled to withhold and appropriate any amount payable to the Supplier under any Contract then existing between the Company and the Supplier, in case the Supplier fails to make payment, in terms of the written demand, within 7 days thereof. Without prejudice to the foregoing actions, in respect to any breach of this Agreement, the Company shall be entitled to take any other action against the Supplier as per applicable laws, the Contract, Company's applicable policies, guidelines rules, procedures, etc.

9. Without prejudice to any other mode of recovery as may be available to the Company for recovery of the amount determined as due as per Clause 8(e) hereinabove, the Company shall have a right to withhold, recover and appropriate the amount due towards such losses, damages, expenses, from any amount due to the Supplier in respect of any other Contract (s) placed on him/it by any department/office/Unit/Division of the said Company.

10. Arbitration & Conciliation:

- a) In case amicable settlement is not reached between the Parties, in respect of any dispute or difference or claim or controversy arising out of the formation, breach, termination, validity or execution of the Contract(or Agreement) 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, then, either Party may, by a notice in writing to the other Party refer such dispute or difference or controversy or claim, (except as to any matters, the decision of which is specifically provided for therein) to the sole arbitration by the arbitrator appointed by Head/In-Charge of the Unit/Division/Region.
- b) The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the parties to the dispute.
- c) Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India), or other statutory modifications or re enactments thereof and the rules made thereunder and for

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the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be at ----- **(Insert the name of the city/town of the concerned BHEL Unit/Division).**

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

In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred to by either party to the arbitration of one of the arbitrators 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.

e) Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Supplier shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner.

11. Governing Law & Jurisdiction:

This Agreement shall be governed by and be construed as per applicable Indian Laws in force at the relevant time.

Subject to clauses 10(a) and 10(d) hereinabove, all matters in connection with the subject agreement shall be subject to exclusive jurisdiction of Courts situated at ----- **(insert the name of the place where the BHEL Unit/Division is located)**

SIGNATURE

WITNESSES

1.

Name

Address:

2.

Name:

Address: