



PPX-DABG DEPARTMENT
BHARAT HEAVY ELECTRICALS LIMITED
HEEP: HARDWAR-249 403 (Uttarakhand)
FAX: +91 1334 226462
TEL: +91 1334 285076
E-mail: akshukla@bhel.in

Ref: PPX-DABG/EOI/26-27/03

Date: 18/08/2026

**NOTICE INVITING TENDER FOR EMPANELMENT OF INDIAN DEVELOPERS FOR
DESIGN, DEVELOPMENT, TESTING AND SUPPLY OF VR & INTERACTIVE 3D
BASED TRAINING AND MAINTENANCE SIMULATION MODULE FOR 76MM SRGM**

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 EMPANELMENT OF INDIAN DEVELOPERS FOR DESIGN, DEVELOPMENT, TESTING AND SUPPLY OF VR & INTERACTIVE 3D BASED TRAINING AND MAINTENANCE SIMULATION MODULE FOR 76MM SRGM**

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.

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 **"EMPANELMENT OF INDIAN DEVELOPERS FOR DESIGN, DEVELOPMENT, TESTING AND SUPPLY OF VR & INTERACTIVE 3D BASED TRAINING AND MAINTENANCE SIMULATION MODULE FOR 76MM SRGM** against Reference No. PPX-DABG/EOI/26-27/03, SUBMITTED BY (Name of company)".



PPX-DABG DEPARTMENT
BHARAT HEAVY ELECTRICALS LIMITED
HEEP: HARDWAR-249 403 (Uttarakhand)
FAX: +91 1334 226462
TEL: +91 1334 285076
E-mail: akshukla@bhel.in

The last date for submission of Technical offers is **08/09/2026**. 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.

(Ashutosh Shukla)
MANAGER (PPX-DABG)



BHARAT HEAVY ELECTRICALS LIMITED (BHEL)
HARIDWAR – DEFENCE & AEROSPACE BUSINESS GROUP

Ref no.: DABG/DPE/EOI/26-27/VR Rev.00

Date: 26/06/2026

**EXPRESSION OF INTEREST FOR EMPANELMENT OF INDIAN DEVELOPERS FOR
DESIGN, DEVELOPMENT, TESTING AND SUPPLY OF VR & INTERACTIVE 3D BASED
TRAINING AND MAINTENANCE SIMULATION MODULE FOR 76MM SRGM**

CONTENTS

Contents	1
1. INTRODUCTION	3
2. OBJECTIVE	3
3. SCOPE OF WORK	3
4. System Overview	4
4.1. Functional Modules.....	4
4.2. Technical Requirements.....	5
4.2.1. System Functional Requirements	5
4.2.2. Fault & Maintenance Simulation Requirements.....	6
5. Operational Requirements / Features of the Simulator	6
5.1.1. 3D Modeling of Gun Subsystems	6
5.1.2. Complete Gun Mount 3D Representation	6
5.1.3. Operator Consoles and Electronic Systems	7
5.1.4. Maintenance Mode Simulation.....	7
5.1.5. Data Security and Access Control.....	7
5.1.6. Deliverables and Source Code Ownership	8
5.1.7. Training Content Conversion.....	8
5.1.8. Environmental Simulation (Sea States).....	8
5.1.9. Multilingual Audio-Visual Support	8
5.1.10. Standalone VR Operation.....	9
5.1.11. Desktop Compatibility.....	9
5.1.12. Instructor Monitoring System	9
5.1.13. COT Panel Functionality Simulation	9
5.1.14. Proximity Switch Interlock Simulation	9
5.1.15. Multi-Session Instructor Control	9
5.1.16. Sea State Scaling and Motion Effects.....	10
5.1.17. Requirement Capture and Field Study	10
5.1.18. Defect Simulation and Documentation.....	10
5.1.19. Transparency Modes.....	10



BHARAT HEAVY ELECTRICALS LIMITED (BHEL)

HARIDWAR – DEFENCE & AEROSPACE BUSINESS GROUP

5.1.20.	Maintenance Philosophy Module	10
5.1.21.	Multilingual Content Digitization	11
5.1.22.	3D Model Generation from Limited Data	11
5.1.23.	Standards Compliance Testing	11
5.1.24.	Training and Knowledge Transfer	11
5.1.25.	Deployment and Commissioning	11
6.	DELIVERY & DEPLOYMENT REQUIREMENTS	12
7.	ACCEPTANCE CRITERIA.....	12
8.	SUPPORT & LIFECYCLE REQUIREMENTS.....	12
9.	TECHNICAL EVALUATION METHODOLOGY	13
10.	Final Acceptance of the Developed Module	13
11.	SECURITY & CONFIDENTIALITY	14
12.	Framework confidentiality agreement	14
	ANNEXURE – I: SUBMISSION REQUIREMENTS	15
	ANNEXURE – II: COMPANY DETAILS	16
	ANNEXURE – III: EXPERIENCE DETAILS	16
	ANNEXURE – IV: INFRASTRUCTURE DETAILS	16
	ANNEXURE – V: COMPLIANCE STATEMENT.....	16
	ANNEXURE – VI: QUALITY PLAN	16



1. INTRODUCTION

This Expression of Interest (EOI) invites prospective Indian developers with demonstrated capability in designing, developing, testing, and deploying high-fidelity virtual reality (VR) and interactive 3D training simulation systems in line with defence industry standards, to associate with Bharat Heavy Electricals Limited (BHEL) – HEEP, Haridwar.

The proposed system is intended for the SRGM (76mm Super Rapid Gun Mount), a compact, lightweight, and versatile naval artillery system manufactured by BHEL in collaboration with Leonardo, and deployed across various Indian Naval platforms.

Bharat Heavy Electricals Limited (BHEL), a Government of India Central Public Sector Enterprise with over six decades of experience in engineering and manufacturing, is a leading organization serving core infrastructure sectors including energy, transportation, industry, renewable energy, and defence, and has contributed significantly to the nation's power generation and industrial development.

2. OBJECTIVE

To develop a **standalone VR-based training ecosystem** for:

- Operator familiarisation
- Maintenance training
- Fault diagnosis simulation
- Scenario-based learning
- Instructor-led training environment

3. SCOPE OF WORK

This proposal aims to introduce Virtual Reality (VR) and interactive 3D-based modules for operator training and maintenance assistance, focused on enhancing understanding of the Gun Mount system. The solution will provide immersive training on the basic functionality of the Gun Mount, its key components, maintenance requirements, and common failure scenarios within the SRGM system, along with detailed identification, troubleshooting, and rectification procedures.

As part of this project, a high-fidelity 3D model of the system will be developed to enable realistic simulation and interaction. The entire training platform will be designed with high-quality graphics to ensure a seamless user experience, with no pixilation, frame drops, or visual stuttering during training sessions.



4. SYSTEM OVERVIEW

Item	Description
1	Development of SRGM digital twin (high-fidelity 3D model)
2	VR training application (standalone + desktop)
3	Multi-mode simulation system
4	Instructor control system
5	Fault injection engine
6	Maintenance training workflows

The VR module shall operate in three distinct modes: **Learning/Training Mode**, **Defects & Resolution Mode**, and **Maintenance Mode**. Each mode shall provide interactive 3D visualization of the SRGM system with contextual guidance.

4.1. FUNCTIONAL MODULES

A. Learning / Training Mode

This mode is intended to provide an intuitive understanding of the SRGM system and its operational workflow.

Key requirements:

- Provide a complete **3D overview of the gun system**, including major assemblies and components.
- Demonstrate the **firing sequence step-by-step**, highlighting the functional flow of operations.
- Enable **component-level interaction**, allowing users to isolate and inspect parts.
- Include **transparent (X-ray) mode visualization** to reveal internal mechanisms during operation.
 - Example: show spring compression and release within the breech block during cycling.
- Highlight key subsystems dynamically during operation for better comprehension.

B. Defects and Resolution Mode

This mode focuses on common faults, troubleshooting procedures, and corrective actions.



BHARAT HEAVY ELECTRICALS LIMITED (BHEL) HARIDWAR – DEFENCE & AEROSPACE BUSINESS GROUP

Key requirements:

- Visualize **common failure scenarios**, such as:
 - Breech block stuck
 - Misfiring
 - Jamming or improper cycling
- Provide **step-by-step repair and troubleshooting workflows** in VR.
- Highlight required **tools and repair procedures visually** within the 3D environment.
- Allow users to interactively identify faults and observe resolution steps.
- Integrate **supporting CBT materials**, including:
 - Reference videos
 - PDF manuals
- Contextually display these references when relevant faults are selected.

C. Maintenance Mode

This mode is designed to guide users through routine and scheduled maintenance activities.

Key requirements:

- Highlight individual **components and assemblies requiring maintenance**.
- Provide **interactive 3D guidance for maintenance procedures**.
- Link each maintenance task to:
 - Relevant **PDF documentation**
 - Instructional **videos**
- Clearly indicate the **exact section of the system where maintenance is performed**, ensuring spatial correlation with the VR model.

Support step-by-step visualization of disassembly, inspection, servicing, and reassembly procedures.

D. Training Modes

Module	Description
Training Mode	System overview, firing cycle, component interaction
Fault Simulation Mode	Fault injection, diagnosis, repair workflow
Maintenance Mode	Preventive & corrective maintenance procedures

4.2. TECHNICAL REQUIREMENTS

4.2.1. SYSTEM FUNCTIONAL REQUIREMENTS

Sl. No.	Requirement
---------	-------------



BHARAT HEAVY ELECTRICALS LIMITED (BHEL) HARIDWAR – DEFENCE & AEROSPACE BUSINESS GROUP

1	High fidelity 3D model of SRGM system
2	Exploded view of assemblies
3	Real-time simulation of mechanical systems
4	Functional replication of operator console (COT)
5	Simulation of ~49 interlock/proximity switches
6	Multi-layer transparency system (min. 5 levels)
7	Sea state simulation (4 levels minimum)
8	Environmental lighting (day/overcast/dusk/night)
9	Multilingual support (English & Hindi)
10	Offline standalone VR deployment
11	Desktop version compatibility
12	Instructor dashboard (multi-user control)

4.2.2. FAULT & MAINTENANCE SIMULATION REQUIREMENTS

Area	Requirement
Fault Library	Misfire, breech jam, sensor/interlock failure
Diagnosis	Step-by-step guided troubleshooting
Maintenance	Component-level procedural simulation
Media Integration	Embedded PDF/video/audio content
Traceability	Fault logging and resolution history

5. OPERATIONAL REQUIREMENTS / FEATURES OF THE SIMULATOR

5.1.1. 3D MODELING OF GUN SUBSYSTEMS

The simulator shall capture all functionalities of gun submodules including, but not limited to:

- Barrel
- Breech block
- Rocking arm
- Motor chains and associated mechanisms

The system shall provide:

- Fully interactive **3D exploded views** of each component
- High-fidelity visualization developed and captured directly in the target system environment

5.1.2. COMPLETE GUN MOUNT 3D REPRESENTATION

The simulator shall include a complete **3D model of the gun mount**, covering:

- Upper deck components
- Lower deck components



BHARAT HEAVY ELECTRICALS LIMITED (BHEL)

HARIDWAR – DEFENCE & AEROSPACE BUSINESS GROUP

The developer shall deploy a dedicated team with expertise in:

- 3D modeling of complex mechanical defense systems
- On-site capture and system-based modeling of assemblies

5.1.3. OPERATOR CONSOLES AND ELECTRONIC SYSTEMS

The simulator shall replicate:

- Operator consoles (COT panels)
 - Proximity switches
 - All electronic and control devices of the gun mount

Requirements include:

- Functional simulation of operational logic
- Representation of gun mount operational philosophy

The developer must:

- Provide certification or proven experience in SRGM or equivalent systems
- Deploy a dedicated team for OEM/Naval site visits
- Cover all travel and field requirements for design capture, maintenance understanding, and repair methodologies

5.1.4. MAINTENANCE MODE SIMULATION

The maintenance module shall include:

- Context-sensitive highlighting of relevant components
- Audio and text-based step-by-step maintenance instructions
- Embedded 3D simulation-based video tutorials within the VR environment

The system shall:

- Demonstrate defect resolution procedures
- Provide full maintenance and repair methodology in interactive 3D format

5.1.5. DATA SECURITY AND ACCESS CONTROL

The simulator shall include robust data protection mechanisms:

- Multi-level user access control
- Data encryption and protection against unauthorized access or pilferage
- Secure handling of configuration and system data



5.1.6. DELIVERABLES AND SOURCE CODE OWNERSHIP

The developer shall provide:

- Complete source code including all revisions
- Software libraries and media assets
- Installation tools, jigs, and training materials

Additionally:

- Physical training on software development shall be provided at OEM premises
- Full handover to WESEE or designated authority

5.1.7. TRAINING CONTENT CONVERSION

The system shall support conversion of:

- Textual training materials into video and PDF formats
- Defect logs into 3D simulation-based instructional videos

All reference materials shall be:

- Digitized
- Integrated into VR environment
- Structured for defect analysis and training

5.1.8. ENVIRONMENTAL SIMULATION (SEA STATES)

The simulator shall support:

- Multiple sea conditions (calm to turbulent)
- At least four distinct sea states
- Dynamic ship motion response to sea conditions
- Variable sky and lighting environments:
 - Clear sky
 - Overcast
 - Dusk

5.1.9. MULTILINGUAL AUDIO-VISUAL SUPPORT

The system shall provide:

- Audio narration and on-screen text support



BHARAT HEAVY ELECTRICALS LIMITED (BHEL) HARIDWAR – DEFENCE & AEROSPACE BUSINESS GROUP

- Bilingual capability: English and Hindi

5.1.10. STANDALONE VR OPERATION

The VR system shall:

- Operate fully in offline mode
- Function without internet connectivity
- Run independently on VR headset hardware

5.1.11. DESKTOP COMPATIBILITY

Training modules shall also be compatible with:

- Standalone desktop PCs
- Offline operation without network dependency

5.1.12. INSTRUCTOR MONITORING SYSTEM

The system shall enable:

- Real-time monitoring of at least 4 VR users simultaneously
- Instructor dashboard for session tracking
- Ability to observe trainee activities in VR environment

5.1.13. COT PANEL FUNCTIONALITY SIMULATION

The VR system shall replicate:

- COT/operator panel controls
- Functional selection and operational command execution
- Real-time interaction with simulated systems

5.1.14. PROXIMITY SWITCH INTERLOCK SIMULATION

The system shall simulate:

- 49 proximity switches across the gun mount
- Full interlock logic and safety systems
- Fault isolation training for maintenance personnel

5.1.15. MULTI-SESSION INSTRUCTOR CONTROL

The instructor shall be able to:



BHARAT HEAVY ELECTRICALS LIMITED (BHEL)

HARIDWAR – DEFENCE & AEROSPACE BUSINESS GROUP

- Manage up to 12 VR sessions simultaneously
- Inject dynamic training scenarios in real time
- Control training progression and events

5.1.16. SEA STATE SCALING AND MOTION EFFECTS

The system shall include:

- Adjustable sea state scaling
- Transition from calm to highly turbulent conditions
- Realistic ship motion behaviour based on environmental conditions

5.1.17. REQUIREMENT CAPTURE AND FIELD STUDY

The developer shall:

- Conduct dedicated field visits for requirement gathering
- Prepare design review reports
- Develop finalized system architecture based on real operational input

5.1.18. DEFECT SIMULATION AND DOCUMENTATION

The simulator shall include:

- Historical defect case studies
- Linked PDF documentation and interactive simulations
- Step-by-step defect resolution training modules

5.1.19. TRANSPARENCY MODES

The system shall support **5 levels of transparency**, where:

- At level 5, only key components (barrel, motor, chain pulley, shells) remain opaque
- Other components become progressively transparent for training visualization

5.1.20. MAINTENANCE PHILOSOPHY MODULE

The system shall:

- Incorporate full maintenance philosophy and procedures
- Use system documentation collected during field visits
- Provide immersive procedural training in VR



5.1.21. MULTILINGUAL CONTENT DIGITIZATION

The system shall support:

- Conversion of documents into audio and editable digital formats
- Full bilingual support (English and Hindi)
- Mapping of textual content with 3D models for narration and demonstration

5.1.22. 3D MODEL GENERATION FROM LIMITED DATA

The developer shall:

- Create 3D models from sketches, measurements, or partial data
- Compensate for missing detailed drawings due to confidentiality constraints
- Ensure functional accuracy of all assemblies

5.1.23. STANDARDS COMPLIANCE TESTING

All modules shall be tested in compliance with:

- Applicable national standards
- International defense simulation standards
- Industry best practices

5.1.24. TRAINING AND KNOWLEDGE TRANSFER

The developer shall:

- Provide structured training to BHEL and Naval teams
- Conduct hands-on training at OEM or designated premises
- Ensure competency in operation and maintenance of the system

5.1.25. DEPLOYMENT AND COMMISSIONING

The system shall be:

- Fully deployed and functional within 2 months of hardware/software supply
- Tested and proven for all functionalities within the commissioning period



6. DELIVERY & DEPLOYMENT REQUIREMENTS

Parameter	Requirement
Deployment Mode	Offline standalone VR + Desktop
VR Users	Minimum scalable architecture
Instructor Control	Control up to 12 VR stations
Monitoring	Simultaneous monitoring of 4 sessions
Scenario Injection	Real-time fault/environment injection
Performance	No frame drops / real-time rendering
Interoperability	Modular design for future upgrades

7. ACCEPTANCE CRITERIA

Final acceptance shall be based on:

Stage	Requirement
Factory Acceptance Test (FAT)	Functional compliance
Site Acceptance Test (SAT)	On-site validation
User Acceptance Test (UAT)	BHEL/Navy approval
Training Completion	Instructor & operator training
Documentation	Complete technical handover

8. SUPPORT & LIFECYCLE REQUIREMENTS

The Vendor shall be capable of providing service support for a minimum period of fifteen (15) to twenty (20) years. Even after the expiry of this minimum mandatory support period, the Vendor shall provide at least two (2) years' prior written notice to BHEL before discontinuing or closing the production line. This notice period shall enable BHEL to place a lifetime buy order for required items/spares prior to the closure of the said production line

Parameter	Requirement
Support Period	15–20 years
End-of-Life Notice	Minimum 2 years prior notice
Maintenance	Software updates & bug fixes
Spare Support	Availability of updates & modules



BHARAT HEAVY ELECTRICALS LIMITED (BHEL)
HARIDWAR – DEFENCE & AEROSPACE BUSINESS GROUP

9. TECHNICAL EVALUATION METHODOLOGY

Technical evaluation shall be based on following parameters

Technical Evaluation Score Sheet (Total: 100 Marks):

SN	Parameter	Max Marks	Evaluation Criteria
1.	Minimum 1 similar VR/3D defence project. (Evidence of execution (PO / completion certificate, end customer acceptance/ feedback letter and demo are to be provided)).	30	Similar projects, defence domain exposure
2.	Technical Architecture & Design Approach	10	Scalability, modularity, offline capability
3.	3D Modelling & Visual Fidelity Capability	10	Real-time rendering, physics accuracy
4.	Fault Simulation & Scenario Engine	10	Depth of diagnostic simulation
5.	System Integration Capability	10	COT replication, interlocks, system linking
6.	Cybersecurity & Data Protection	10	Defence-grade compliance
7.	Instructor & Multi-user Management System	5	Control dashboard capability
8.	Training Methodology & Content Conversion	5	Multimedia integration
9.	Deployment Strategy & Offline Capability	5	VR + desktop compatibility
10.	Support & Lifecycle Commitment	5	Long-term support capability
Note: Minimum Score for Qualification = 75 Marks			

10. FINAL ACCEPTANCE OF THE DEVELOPED MODULE

Upon successful completion of development, tests, supply, setting to work, proving of all functionalities & trainings to BHEL/Navy teams, the developed module shall be accepted after satisfactory clearance from BHEL and Indian Navy.



BHARAT HEAVY ELECTRICALS LIMITED (BHEL)
HARIDWAR – DEFENCE & AEROSPACE BUSINESS GROUP

11. SECURITY & CONFIDENTIALITY

Requirement	Description
FCA	Mandatory signing of Framework Confidentiality Agreement
Data Security	Role-based access control (RBAC)
Protection	Anti-tamper & anti-piracy safeguards
Compliance	Defence-grade cybersecurity adherence
IP Rights	Full ownership transferred to BHEL

12. FRAMEWORK CONFIDENTIALITY AGREEMENT

The prospective vendor will be required to sign Framework confidentiality agreement cum undertaking (FCA).

The relevant details/documents shall be submitted only after signing of Framework Confidentiality Agreement

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

1) For commercial queries

Ashutosh Shukla

Defence and Aerospace Business Group,
Heavy Electrical Equipment Limited,
Bharat Heavy Electricals Limited (BHEL), Ranipur,
Haridwar, Uttarakhand.

LL-01334-285076 Emailid akshukla@bhel.in

2) For technical queries

Yashpal Singh Dewri

Defence and Aerospace Business Group,
Heavy Electrical Equipment Limited,
Bharat Heavy Electricals Limited, Ranipur,
Haridwar, Uttarakhand.

phone- 01334-281452

Email id: ysdewri@bhel.in



BHARAT HEAVY ELECTRICALS LIMITED (BHEL)
HARIDWAR – DEFENCE & AEROSPACE BUSINESS GROUP

ANNEXURE – I: SUBMISSION REQUIREMENTS

a. LIST OF DOCUMENTS TO BE SUBMITTED BY VENDOR

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/R&D/Engg./Testing Facilities: List & details of facilities / equipments for designing, manufacturing, inspection & testing are to be submitted.
4. Details of previous experience related to successful development & implantation of Virtual Reality (VR) & interactive 3D based operator/training/ maintenance assistant modules.
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

b. Vendor Submission Checklist

Sl. No.	Document
1	Company profile
2	Registration details
3	Technical capability statement
4	Past project references
5	Infrastructure details (R&D/testing)
6	ISO / Quality certifications
7	Financial strength documents
8	Technical brochures
9	Compliance statement



BHARAT HEAVY ELECTRICALS LIMITED (BHEL)
HARIDWAR – DEFENCE & AEROSPACE BUSINESS GROUP

ANNEXURE – II: COMPANY DETAILS

Field	Details
Company Name	
Address	
Contact Person	
Email / Phone	
Registration No.	

ANNEXURE – III: EXPERIENCE DETAILS

Project Name	Client	Scope	Year	Remarks

ANNEXURE – IV: INFRASTRUCTURE DETAILS

Facility	Description
VR Lab	
3D Modelling Tools	
Simulation Engines	
Testing Infrastructure	

ANNEXURE – V: COMPLIANCE STATEMENT

Vendor shall certify:

- Compliance with all EOI requirements
- Acceptance of confidentiality conditions
- Agreement to transfer source code and IP
- Availability for audits and inspections

ANNEXURE – VI: QUALITY PLAN

- Development lifecycle methodology
- Testing strategy (Unit / Integration / System)
- FAT / SAT / UAT procedures
- Risk management approach

Annexure-G

(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 the _____ 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.

Annexure-G

- 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

Annexure-G

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.

Annexure-G

- 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

Annexure-G

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

Annexure-G

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

Annexure-G

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: