



# **Bharat Heavy Electricals Limited**

**BHEL House, Siri Fort, New Delhi – 110 049**

**Notice for Inviting  
Expression of Interest for  
Technology tie-up (with IPR)/  
Collaboration for  
joint development of  
30 mm Naval Surface Gun**

**Eoi Ref No.: BHEL/AA/TL/0206**

**Date: 25<sup>th</sup> February, 2026**



# Bharat Heavy Electricals Limited

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## Section-1: Disclaimer

The information contained in this Expression of Interest (EoI) document has been provided to the Prospective Collaborator(s) by or on behalf of Bharat Heavy Electricals Limited (BHEL) under the following terms and conditions:

1. This EoI is intended to assist Prospective Collaborators in formulating their proposals. It does not purport to contain all the information required by the applicant. Prospective Collaborators should conduct their own independent investigations, verify the accuracy, reliability and completeness of the information provided, and seek independent professional advice where necessary from appropriate sources.
2. BHEL, its employees, and advisors make no representation or warranty and shall incur no liability under any law, statute, rules, or regulations regarding the accuracy, reliability, or completeness of this document. BHEL reserves the right to modify, amend, or supplement the information in this EoI at its absolute discretion.
3. The issuance of this EoI does not bind BHEL to select or shortlist any Prospective Collaborator. BHEL is not obligated to proceed with any selected party and shall not be liable for any commercial or consequential liabilities.
4. Prospective Collaborators shall bear all costs associated with the preparation, technical discussions, and submission of their response. BHEL shall not be responsible for these costs, regardless of the EoI process outcome.
5. BHEL reserves the right to accept or reject any application, or annul the entire EoI process at any time, without assigning any reasons or incurring any liability. In the event of annulment, BHEL may invite fresh applications at its discretion.
6. BHEL reserves the right to verify all statements and documents submitted at any stage of the evaluation. Any material misrepresentation, failure to provide supplemental information, or canvassing in any form shall lead to immediate disqualification.
7. BHEL reserves the right to disqualify any applicant during or after completion of EoI process, if it is found there was a material misrepresentation by any such applicant or the applicant fails to provide within the specified time, supplemental information sought by BHEL. Any such verification or lack of such verification by BHEL shall not relieve the applicant of his obligations or liabilities hereunder nor will it affect any rights of BHEL.



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## Section-2: Objective of Expression of Interest

### 2.1 Introduction:

Bharat Heavy Electricals Limited (BHEL) invites Expressions of Interest (Eoi) from reputed Companies and Original Equipment Manufacturers (OEMs) for a long-term strategic partnership to address the requirements of the Indian Navy/ Ministry of Defence (MoD) for 30 mm Naval Surface Gun for Indian Navy under Make-II Category of DAP 2020.

30 mm Naval Surface Gun is intended for fitment onboard small ships as the primary weapon and on large ships as a secondary weapon for engaging fast-moving surface targets/ boats. Additional system requirements, performance parameters, and engagement capabilities will be shared with shortlisted partners during subsequent stages of the selection process.

### 2.2 About BHEL:

BHEL is a leading state-owned engineering and manufacturing enterprise, with the Government of India holding a 63.17% equity stake. Recognized as a “Maharatna” company since 2013, BHEL plays a pivotal role in nation-building by catering to the core infrastructure sectors of the Indian economy, including power, transportation, defense, renewable energy, and heavy industry.

As an integrated power plant equipment manufacturer, BHEL has over five decades of expertise in supplying equipment across the entire energy spectrum - thermal, gas, hydro, nuclear, and renewables - spanning generation, transmission, and distribution. BHEL’s supplied equipment accounts for approx. 200 GW of India’s installed thermal generation capacity, underlining its dominance in the power sector.

BHEL is listed on India’s major stock exchanges (i.e. NSE and BSE) with market capitalisation of approx. \$ 10Bn and operates with a vast nationwide presence. It has 16 manufacturing units, 4 power sector regions, 8 service centers, 15 regional offices and numerous project sites across India and abroad. Internationally, BHEL has a presence in approx. 90 countries with a cumulative overseas installed capacity of nearly 10,000 MW. Notable countries include Malaysia, Oman, Iraq, Syria, Sudan, Libya, Cyprus, Malta, Afghanistan, Bangladesh, Bhutan, and New Zealand.

For FY 2024–25, BHEL reported an annual turnover of approx. \$ 3Bn. Its operations are driven by a highly skilled workforce of around 28,000 employees, advanced R&D capabilities, and state-of-the-art manufacturing infrastructure. The hallmark of BHEL’s reliability and product quality lies in its strict adherence to global standards—achieved



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through a combination of indigenous innovation and technology collaborations with leading global firms. Our ongoing technology partnerships are:

- **Siemens Energy Global GmbH & Co. KG, Germany** - Steam turbines, generators, condensers
- **GE Vernova Inc. (formerly GE Technology GmbH), Switzerland** - Gas turbines
- **Leonardo S.p.A, Italy** - Upgraded Super Rapid Gun Mount (SRGM) systems
- **Arabelle Solutions, France** - 700MWe Nuclear Steam Turbine
- **Valmet Automation Oy, Finland** – Distributed control systems
- **HIMA Middle East FZE, Dubai** – KAVACH (Train Collision Avoidance System)
- **Mitsubishi Heavy Industries Ltd., Japan** – Flue Gas Desulphurization systems
- **Babcock Power Environmental Inc., USA** – Selective catalytic reduction systems
- **Nano Co. Ltd. & HLB Power Co. Ltd., Korea** – SCR catalysts, gates & dampers
- **Sumitomo SHI FW Energia Oy, Finland** – Circulating fluidized bed combustion boilers
- **Vogt Power International Inc., USA** – Heat recovery steam generators
- **Kawasaki Heavy Industries Ltd., Japan** – Stainless steel metro coaches
- **Indian Space Research Organization (ISRO)** – Space-grade lithium-ion cells
- **Bhabha Atomic Research Centre (BARC)** - 50 kW alkaline water electrolyser for hydrogen production, and Mixed Matrix Membrane
- **CSIR-IIP** – PVSA-based medical oxygen plants
- **DMRL (DRDO)** - Fused Silica based Ceramic Radomes

With its legacy of engineering excellence, innovation-driven growth, and strategic collaborations, BHEL continues to be a cornerstone of India's industrial and technological advancement. For more details about the entire range of BHEL's products and operations please visit our website <http://www.bhel.com>.

## 2.3 BHEL presence in Defence & Aerospace:

Since 1994, BHEL has been manufacturing and supplying the 76/62 Super Rapid Gun Mount in collaboration with M/s Leonardo, demonstrating its long-standing commitment to India's naval defense capabilities. BHEL has supplied the Integrated Platform Management System (IPMS) for warships and Armoured Recovery Vehicles to the Indian Army.

BHEL plays a critical role in India's space program through its strong association with ISRO. It is a key manufacturer and supplier of high-reliability, space-grade Li-ion cells and batteries, satellite solar panels, hot-formed titanium shells and domes, as well as cryogenic tanks essential for launch vehicles.



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## **Section 3: Scope of Cooperation & Pre-Qualification Requirements**

### **3.1 Scope of Cooperation:**

BHEL seeks to establish a Technology Collaboration Agreement (TCA) with IPR transfer/joint development rights. This tie-up shall enable BHEL to Design, Engineer, Manufacture, Assemble, Test, Supply, Install, Commission, Repair, Service, and Retrofit the 30 mm Naval Surface Gun system.

Based on EoI responses, BHEL will shortlist prospective partners on the basis of the Prequalification requirements (clause 3.2) for detailed commercial and technical discussions. The detailed terms and conditions for such collaboration shall be mutually agreed upon.

### **3.2 Prequalification requirements (PQRs):**

The Prospective Collaborator(s) should have designed, developed, manufactured and supplied at least 1 (one) no. 30mm NSG matching with the technical specifications mentioned at Annexure-3 or superior specification in last 5 years from date of issuance of this EoI. (to be substantiated by documentary evidence)

### **3.3 Technical requirements for the program:**

Prospective partner should have designed and developed following critical technologies including but not limited to gun barrel, gun control software, fire control system, servos, EO sensors and associated electronics of the 30mm or above calibre gun system. (to be substantiated by documentary evidence)



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## Section 4: Submission Instructions & Guidelines

### 4.1 Important Dates:

Sl.	Description	Date
1.	Issue of Eol document	25 <sup>th</sup> February 2026
2.	Last date of submission of Eol response	18 <sup>th</sup> March 2026

Any amendment/corrigendum to this Eol, shall be notified only at [www.bhel.com](http://www.bhel.com)

### 4.2 Documents submission:

Interested Companies and OEMs possessing proven technology and meeting the Pre-Qualification Requirements (PQR) specified in Clause 3.2 are invited to submit their responses along with the following documents (in hard and/or soft copy) on or before 18<sup>th</sup> March 2026:

1. Company profile and background
2. Detailed product catalogue
3. Specification and technical features of the offered product/platform
4. Signed copy of the Eol document along with Annexure-1, Annexure-2, Annexure-3, and Annexure-4
5. Audited financial statements including auditor's reports for the FY 24-25, FY23-24, FY22-23 or calendar year 2024, 2023, 2022.

Such response submitted by the prospective collaborator shall be in accordance with the terms set forth herein, as modified, altered, amended and clarified from time to time by BHEL on or before the date specified for submission of expression of interest.

### 4.3 Contact Details:

The respondent shall submit their response along with supporting documents to:

**Additional General Manager**

Corporate Technology Management

Bharat Heavy Electricals Limited

BHEL House, Siri Fort, New Delhi - 110049

**Phone:** +91 11 66337213 / 7458

**Mobile:** +91 9818103430/ +91 9441176267

**Email:** [techeoi@bhel.in](mailto:techeoi@bhel.in)



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## 4.4 General Instructions:

- **Language:** All correspondence and documents must be in English. Translated literature must be accompanied by the original, with the English translation governing interpretation.
- **Authorized Signatory:** All pages of the response must be duly signed by an authorized signatory.
- **Single Proposal:** Multiple proposals from the same Prospective Collaborator will not be accepted.
- **Debarment:** Entities debarred or blacklisted by the Central/State Governments of India, or controlled entities thereof, are ineligible to participate.
- **Site Inspection:** BHEL reserves the right to inspect the Prospective Collaborator's works/office/reference sites for evaluation purposes prior to selection, as deemed necessary. BHEL decision in this regard shall be final.



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## **Section 5: Statutory Restrictions & Legal Framework**

### **5.1 Restrictions on specified Transfer of Technology with an entity from a country(ies) sharing land border with India:**

Respondent from a country which shares a land border with India will be eligible to respond to this EoI, only if Respondent is registered with Competent Authority (Registration Committee constituted by the Department of Promotion of Internal Trade (DPIIT) of Govt. of India). Such registration should be at least valid for the entire period of EoI due date or any extension thereof.

Respondent from a country which shares a land border with India means: a) An entity incorporated, established or registered in such country; or b) A subsidiary of an entity incorporated, established or registered in such country; or c) An entity substantially controlled through entities incorporated, established or registered in such country; or d) An entity whose beneficial owner is situated in such a country; or e) An Indian (or other) agent of such an entity; or f) A natural person who is a citizen of such a country; or g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

### **5.2 Confidentiality**

All information relating to the examination, clarification, evaluation, and comparison of EoIs, as well as recommendations, shall remain strictly confidential. Any attempt by prospective partners to influence BHEL's evaluation process will result in immediate disqualification.

### **5.3 Governing Laws & Jurisdiction**

This EoI process shall be governed by and construed in accordance with the laws of India. The courts of New Delhi shall have exclusive jurisdiction over all disputes arising under, pursuant to, or in connection with the EoI process.



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## Annexure-1

### Indicative Scope of Technology Transfer

<b>(a)</b>	<b>Core Technology &amp; Intellectual Property:</b> <ul style="list-style-type: none"><li>• <b>Scope of Technology Transfer:</b> Transfer of state-of-the-art technology (including Intellectual Property Rights) or collaboration for joint development of the 30 mm Naval Surface Gun (meeting the requirements of the Make-II program as per DAP 2020). This shall cover the entire product lifecycle: Design, Engineering, Manufacturing, Assembly, Testing, Supply, Installation, Commissioning, Repair, Servicing, and Retrofitting of the 30 mm Naval Surface Gun.</li><li>• <b>State-of-the-Art technology:</b> Certify that the offered technology represents the latest, most advanced version currently being marketed, produced, or utilized by the Prospective Collaborator.</li><li>• <b>Software &amp; Source Codes:</b> Sharing of all applicable proprietary software, computer programs, control logics, and source codes necessary for the operation, testing, and lifecycle maintenance of the gun system.</li></ul>
<b>(b)</b>	<b>Manufacturing &amp; Facility Setup:</b> <ul style="list-style-type: none"><li>• <b>Facility Planning:</b> Expert assistance in establishing new or augmenting existing manufacturing, assembly, and testing facilities at BHEL. This includes identifying, sizing, selecting, and preparing specifications for required machinery and equipment, as well as their optimal layout and foundational requirements.</li><li>• <b>Tooling &amp; Commissioning:</b> Deputation of the Collaborator's experts to assist in the commissioning of manufacturing facilities and the design of special tools, dies, jigs, and fixtures.</li><li>• <b>Engineering Support:</b> Engineering services and technical support from the Collaborator's primary design and manufacturing offices for all licensed products during the term of the agreement.</li></ul>
<b>(c)</b>	<b>Continuous Upgrades &amp; Iterations:</b> <ul style="list-style-type: none"><li>• <b>Obsolescence Management/Improvements:</b> Transfer of all continuous improvements, modifications, developments, and upgrades carried out by the Collaborator during the validity of the Technology Collaboration Agreement (TCA). This includes updates required to address component obsolescence, new market requirements, and safety-critical enhancements.</li><li>• <b>Field trials/Troubleshooting:</b> Transfer of complete know-how for any modifications or updates implemented to improve system performance, accuracy, or reliability during field trials and regular operations.</li></ul>



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<b>(d)</b>	<b>Training &amp; Knowledge Absorption:</b> <ul style="list-style-type: none"><li>• <b>Personnel Training:</b> Extensive training of BHEL engineers and technicians across all technical domains to ensure independent capability to Engineer, Manufacture, Assemble, Test, Supply, Install, Commission, Repair, Service, and Retrofit the system.</li><li>• <b>Technology Absorption:</b> Deputation of the Collaborator's subject matter experts to BHEL facilities to guide and ensure the seamless absorption and integration of the transferred technology.</li></ul>
<b>(e)</b>	<b>Supply Chain &amp; Sourcing:</b> <ul style="list-style-type: none"><li>• <b>Vendor &amp; Supply Chain Integration:</b> Complete sharing of technical specifications, vendor information, and sourcing details for all Bought-Out Items (BOIs) and sub-assemblies that the Collaborator procures from third-party vendors. This ensures BHEL can independently source items not directly manufactured by the Collaborator.</li></ul>

**Signature & Seal**

**Authorized Signatory of the Prospective Collaborator**



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## Annexure-2

### Prospective Collaborator's Experience of 30 mm Naval Surface Gun

Sl.	Description	Yes/No and remarks, if any
(a)	Whether the Prospective Collaborator is an Original Equipment Manufacturer (OEM) of the proposed 30 mm Naval Surface Gun.	
(b)	Whether documentary evidence to substantiate the PQRs specified at clause 3.2 has been submitted by the Prospective Collaborator.	
(c)	Whether the Prospective Collaborator has designed, developed, manufactured, and supplied at least 1 (one) no. 30mm NSG matching with the technical specifications mentioned at Annexure-3 or superior specification.	
(d)	Whether the Prospective Collaborator has the capability to engineer, design and customize/ undertake joint development of the systems/equipment defined at (a) to meet the parameters as required by the Indian Navy, as and when defined explicitly.	
(e)	Whether Prospective Collaborator's detailed reference list have been enclosed.	
(f)	Whether Prospective Collaborator's annual audited financial reports for last 3 years have been enclosed.	
(g)	Whether the 30 mm Naval Surface Gun offered for technology transfer is the latest being marketed by the Prospective Collaborator.	
(h)	Whether customers (end users) letters / documentary evidence for satisfactory operation of 30 mm Naval Surface Gun which is being offered to BHEL under this EoI have been enclosed.	
(i)	Whether the Prospective Collaborator owns the IPRs for the technology being proposed for transfer under the Technology Collaboration Agreement (TCA) or have an unencumbered right from the owner of the IPRs to sub-license the technology, if applicable.  If yes, whether list of such IPRs is enclosed.	

**Signature & Seal**

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## Annexure-3

### Indicative operational characteristics/features of 30 mm Naval Surface Gun

Sl.	Parameter	Compliance (Yes/No) or Offered Spec.
a)	<b>Calibre:</b> The gun and ammunition should be of 30 mm calibre.	
b)	<b>Range:</b> The Max Effective Range (MER) of the gun gun (with NATO standard conventional ammunition) and ammunition should be > 3 kms.	
c)	<b>Rate of Fire (RoF):</b> The RoF of the gun should be > =200 rounds per min. The gun should be capable of firing in single shot and rapid/ burst mode.	
d)	<b>Magazine Capacity:</b> The magazine capacity shall be >= 150 rounds	
e)	<b>Ammunition:</b> The gun should be capable of firing full range of HE, HEPFF (with proximity and programable / variable time (VT) fuses), tracer, practice, armour piercing and incendiary cartridges of 30 x 173 mm NATO standard (STAGNAG 4624).	
f)	<b>Weight:</b> The total weight of the gun should be < =2000 Kgs (without ammunition).	
g)	<b>Barrel life &amp; Barrel Pressure:</b> The barrel of the gun shall have a life of > =8000 rounds and shall be able to sustain > =1.2 times of the nominal pressure generated by the round.	
h)	<b>Stabilisation:</b> The gun shall be established on > = two axis and meet the following requirements: <b>a) Stabilisation accuracy</b> <=0.5 mRad in both azimuth and elevation. <b>b) Pointing accuracy</b> <= 2 mRad <b>c) Be able to operate</b> > = +/-150 deg in training and atleast -15 deg to + 60 deg in elevation. <b>d) Be able to be locked and unlocked from remote.</b>	
i)	<b>Electro-optical Fire Control System (EOFCS):</b> The EOFCS should be capable of being interfaced with ships combat management system (CMS), ESM, surveillance radar and household data for exchange of information, gyro, log and anemometer and should comprise of an	



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	Electro-Optical Device (EOD), Multi-Function Display Unit (MFDU) and a System Control Panel (SCP) and Recording unit (RU)	
j)	<b>Multi-Functional Display Unit (MFDU):</b> The EOFCS should have a MFDU consisting of a LED monitor with soft touch keys/ push buttons capable of all initializations, operational settings, calibration, and diagnostics and operating various software menus.	
k)	<b>System Control Panel (SCP):</b> The EOFCS should have a SCP consisting of joystick(s)/ soft touch keys/ knobs.	
l)	<b>Recording Unit:</b> The system shall undertake recording and logging of all operational activities using an internal recording unit (RU) connected to the system network.	
m)	<b>Modes of Operation:</b> The 30 mm NSG should be able to operate in the following modes: -  a. <b>Centralise Mode:</b> In this mode the 30 mm NSG with EOFCS shall be controlled and fired from Combat Management system (CMS).  b. <b>Remote Mode:</b> In this mode the 30 mm NSG with EOFCS should be able to be controlled and fired from remote position i.e., from the System Control Panel (SCP) of the EOFCS.  c. <b>Manual Mode:</b> In this mode, the 30 mm NSG with EOFCS should be able to be controlled and fired from a position on/ near the gun mount in case of failure of EOFCS or loss of power supply.	
n)	<b>Safety Requirements:</b> The 30 mm NSG with EOFCS should have the following safety features incorporated into it: -  d. <b>Physical Safety Provision:</b> Mechanical and electrical stoppers to limit the firing arcs.  e. <b>Safety Switch:</b> The system should have a remotely located safety switch (Permit/ Inhibit Switch) to enable/ disable firing of the gun.	
o)	<b>Target:</b> 30mm NSG with EOFCS shall be capable of firing in the single shot and rapid / burst mode while engaging a surface target of NATO standard size (2.3m X 2.3 m) manoeuvring at a speed up to 30 knots and at a range $\geq 3$ km. The EOFCS shall be capable of	



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	detecting micro/ mini / swarm drones and other aerial targets automatically using AI / ML.	
p)	<b>Power:</b> The system (30mm NSG with EOFCS) should be compatible with ship-borne (AC/ DC) power supply and cater for requisite convertor and transformers.	
q)	<b>Built in Test (BIT):</b> The 30 mm NSG with EOFCS should have a Built-In- Test (BIT) feature incorporated into the system. The BIT should operate as part of the normal start-up procedure of the system. The system should be provided with both on-line as well as off-line Built-in Test Facility/ Equipment, which should identify the defective sub unit, up to the level of LRU.	

**Signature & Seal**

**Authorized Signatory of the Prospective Collaborator**



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## Annexure-4

**Reference List:** The Prospective Collaborator shall furnish a summary of their product reference as detailed below for major supplies in the last 5 years

Sl.	Project name/location	Year of Supply/Commissioning	Scope of Work

**Signature & Seal**

**Authorized Signatory of the Prospective Collaborator**