



**Expression of Interest (EoI) for 125 mm Armour Piercing Fin Stabilised
Discarding Sabot (APFSDS)**

Bharat Heavy Electricals Limited
(A Government of India Undertaking)
New Delhi – 110 049
India

Notice for Inviting
Expression of Interest for
125 mm Armour Piercing Fin Stabilised Discarding Sabot
(APFSDS)

EoI Ref No.: BHEL/AA/TL/0208

Date: 24th July 2025



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SECTION-1
Disclaimer

The information contained in this Expression of Interest (EoI) document provided to the Prospective Partner (s), by or on behalf of Bharat Heavy Electricals Limited (BHEL) or any of its employees or advisors, is provided to the Prospective Partner (s) on the terms and conditions set out in this EoI document and all other terms and conditions subject to which such information is provided.

1. The purpose of this EoI document is to provide the Prospective Partner (s) information to assist the formulation of their proposal. This EoI document does not purport to contain all the information each Prospective Partner may require. This EoI document may not be appropriate for all persons, and it is not possible for BHEL, its employees or advisors to consider the business/investment objectives, financial situation and particular needs of each Prospective Partner who reads or uses this EoI document. Each Prospective Partner should conduct his own investigations and analysis and should check the accuracy, reliability and completeness of the information in this EoI document and wherever necessary obtain independent advice 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 as to the accuracy, reliability or completeness of the EoI document.
3. BHEL may, in its absolute discretion, but without being under any obligation to do so, modify, amend or supplement the information in this EoI document.
4. The issue of this EoI does not imply that BHEL is bound to select and shortlist any or all the Prospective Partner (s). Even after selection of suitable Prospective Partner, BHEL is not bound to proceed ahead with the Prospective Partner and in no case be responsible or liable for any commercial and consequential liabilities in any manner whatsoever.
5. The Prospective Partner (s) shall bear all costs associated with the preparation, technical discussion/presentation and submission of response against this EoI. BHEL shall in no case be responsible or liable for these costs regardless of the conduct or outcome of the EoI process.
6. Canvassing in any form by the Prospective Partner (s) or by any other agency on their behalf shall lead to disqualification of their EoI.
7. Notwithstanding anything contained in this EoI, BHEL reserves the right to accept or reject any application and to annul the EoI process and reject all applications, at any time without any liability or any obligation for such acceptance, rejection or annulment and without assigning any reasons, thereof. In the event that BHEL rejects or annuls all the applications, it may at its discretion, invite all eligible Prospective Partners to submit fresh applications.
8. 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.
9. BHEL reserves the right to verify all statements, information and documents submitted by the applicant in response to the EoI. 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

Schedule of EoI Process & Contact Details

A. Schedule of EoI process:

The schedule of activities during the EoI Process shall be as follows:

Sl. No.	Description	Date
1.	Issue of EoI document	24 th July 2025
2.	Last date of submission of EoI response	23 rd August 2025

B. Contact Details:

Senior Manager
Technology Licensing
Corporate Technology Management (CTM)
Bharat Heavy Electricals Limited (BHEL),
BHEL House, Siri Fort, New Delhi 110049
Tel: +91-11- 66337339
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SECTION – 3

Details of Expression of Interest

3.1 Introduction:

This Expression of Interest (EoI) seeks response from respondent who are willing to be associated with BHEL through a long-term Technology Partnership Agreement for 125 mm Armour Piercing Fin Stabilised Discarding Sabot (APFSDS). Partnership shall enable BHEL to Design & Develop, Engineer, Manufacture, Assemble, Test, Supply, Field Install, Commission, Repair and Service 125 mm Armour Piercing Fin Stabilised Discarding Sabot (APFSDS).

3.2 About BHEL:

BHEL is a leading state-owned company, wherein Government of India is holding 63.17% of its equity. BHEL is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing enterprise in India, catering to the core infrastructure sectors of Indian economy viz. energy, transportation, and heavy engineering industry, defence, renewable and non-conventional energy. The energy sector covers generation, transmission and distribution of equipment for thermal, gas, hydro, nuclear and solar photo voltaic power plant. BHEL has been in this business for more than 50 years and BHEL supplied equipment account for approx. 200 GW of the total thermal generating capacity in India. BHEL is also listed in Indian stock exchanges. BHEL has 16 manufacturing units, 4 power sector regions, 8 service centers and 15 regional offices besides host of project sites spread all over India and abroad. BHEL has its footprint in all the inhabited continents with references in 88 countries including Malaysia, Oman, Iraq, Syria Sudan, Libya, Cyprus, Malta, Afghanistan, Bangladesh, Bhutan, New Zealand etc. The cumulative overseas installed capacity of BHEL manufactured power plants nearing 10,000 MW. The annual turnover of BHEL for the Financial Year 2024-25 was around US\$ 3.3 Billion. BHEL's highly skilled and committed manpower of approx. 28000; state-of-the-art manufacturing, R&D facilities and latest technologies helped BHEL to deliver a consistent track record of performance since long. To position leading state-owned companies as Global Industrial giant and as a recognition for their exemplary performance, Government of India categorized BHEL as "Maharatna Company" in 2013.

The high level of quality & reliability of BHEL products is due to adherence to international standards by acquiring and adapting some of the best technologies from leading companies in the world, together with technologies developed in its own R&D centers.

Our ongoing major technology tie-ups include agreements with Siemens Energy Global GmbH & Co. KG., Germany (for Steam Turbines, Generators and Condensers); Mitsubishi Heavy Industries Ltd., Japan (for Flue Gas Desulfurization Systems); Leonardo S.p.A, Italy (for Super Rapid Gun Mount); GE Technology GmbH, Switzerland (for Steam Turbine for Nuclear Power Plant and for Gas turbines); Indian Space Research Organization (ISRO) (for Space Grade Lithium-Ion Cells); CSIR-IIP (PVSA based Medical Oxygen Plant); NANO Company Ltd.,



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Korea (for SCR Catalysts); HLB Power Company Ltd., Korea (for Gates and Dampers); Kawasaki Heavy Industries Ltd., Japan (for Stainless Steel Coaches for Metros); Valmet Automation Oy, Finland (for DCS System); Babcock Power Environmental Inc., USA (for Selective Catalytic Reduction Systems); Sumitomo SHI FW Energia Oy., Finland (for Circulating Fluidized Bed Combustion Boilers); HIMA Middle East FZE, Dubai (for KAVACH System/Train Collision Avoidance System) and Bhabha Atomic Research Centre (BARC) (for 50 kW Alkaline Water Electrolyser System for Hydrogen Production).

* More details about the entire range of BHEL's products and operations can be viewed by visiting our web site www.bhel.com

3.3 BHEL in Defense Sector:

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

With deep expertise in advanced castings and forgings for defense and strategic applications, BHEL has engineered and delivered vital components for warships and submarines. These include permanent magnet-based propulsion motors, frequency and bidirectional converters, alternators, mechanical auxiliaries, turbines, turbo-generators, and condensers.

3.4 Scope of Cooperation:

BHEL is seeking response from Original Equipment Manufacturer(s) (OEMs) / Prospective Partner for 125 mm Armour Piercing Fin Stabilised Discarding Sabot (APFSDS).

The proposed Technology Partnership should enable BHEL to Design & Develop, Engineer, Manufacture, Assemble, Test, Supply, Field Install, Commission, Repair and Service 125 mm Armour Piercing Fin Stabilised Discarding Sabot (APFSDS).

Interested OEMs/Prospective Partner (s) meeting the PQR requirement as specified in clause 3.5 of this EoI are invited to submit their response to this EoI, as per indicative scope of technology transfer given in **Annexure-1**.

Upon receipt of response(s) against this EoI, BHEL will review the response(s) to ascertain suitability of the offer and shortlist Prospective Partner (s) for further discussions. Detailed discussions on commercial and other terms and conditions to finalize the Technology Partnership Agreement (TPA) shall be held with shortlisted Prospective Partner (s). The detailed terms and conditions for such agreement shall be mutually agreed upon.



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3.5 Pre-Qualification Requirements (PQR): The Prospective Partner shall meet following Qualification Requirement as on the date of submission of EoI (*to be substantiated by a documentary evidence*):

- a) Prospective Partner either on its own or along with its consortium partner(s) should have designed, manufactured, assembled, tested and supplied at least 1000 nos. of 120/125 mm Armour Piercing Fin Stabilized Discarding Sabot (APFSDS) having 460 mm penetration depth in last 15 years from the date of closing of EoI.

3.6 Restrictions on Specified Transfer of Technology with an entity from a country which shares a land border with India.

- 3.6.1 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.
- 3.6.2 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.

3.7 Instructions:

- 3.7.1 The interested Prospective Partner (s) should submit their response(s) along with enclosed annexures on or before 23rd August 2025:

Annexure-1: Indicative Scope of Technology Partnership

Annexure-2: Prospective Partner's Experience in the field of 120/125 mm APFSDS

Annexure-3: General technical specifications of 125 mm APFSDS

Annexure-4: Reference List: The Prospective Partner's major supplies of 120/125 mm APFSDS in last 15 years

- 3.7.2 The response shall necessarily be accompanied with following details:
 - 1. Company background
 - 2. Product Profile
 - 3. Technical details
 - 4. Reference list of customers
 - 5. Annual audited financial reports for last 3 (three) years.

- 3.7.3 **Language:** All correspondences and documents related to the EoI response shall be in English language, provided that any printed literature furnished by the Prospective Partner (s) may be written in another language, as long as such literature is accompanied by a translation of its pertinent passages in English language in which case, for purposes of interpretation of the bid, the English translation shall govern.
- 3.7.4 The Prospective Partner(s) shall abide by the terms & conditions, as applicable, of the EoI.
- 3.7.5 All pages of the response against this EoI shall be duly signed by the authorised signatory.
- 3.7.6 Multiple proposals from the same Prospective Partner should not be submitted.
- 3.7.7 BHEL at its discretion shall inspect the Prospective Partner's works/office/reference site premises for the purpose of evaluation, as deemed necessary before selection of Partner. BHEL decision in this regard shall be final.
- 3.7.8 Any Prospective Partner which has been debarred/blacklisted by Central/State Governments of India or by any entity controlled by Central/State Governments of India from participating in any of their project, as on date of submission of EoI, shall not be eligible to submit the EoI.
- 3.7.9 BHEL shall receive applications pursuant to this EoI in accordance with the terms set forth herein, as modified, altered, amended and clarified from time to time by BHEL, and all applications shall be submitted in accordance with such terms on or before the date specified in this EoI for submission of applications.

In case any amendment/corrigendum to this EoI is issued, it shall be notified only at www.bhel.com

3.8 Process to be Confidential:

Information relating to the examination, clarification, evaluation and comparison of EoI and recommendations shall not be disclosed to Prospective Partner (s). Any effort by Prospective Partner (s) to influence BHEL in processing of EoI or selection decisions may result in the rejection of the response against EoI.

3.9 Governing Laws & Jurisdiction:

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

Annexure-1

Indicative Scope of Technology Partnership

(a)	Design & Development of 125 mm Armour Piercing Fin Stabilised Discarding Sabot (APFSDS) as per ongoing requirements of the Indian Army/MoD.
(b)	Licensing & transfer of state-of-the-art technology relating to Design & Development, Engineer, Manufacture, Assemble, Test, Supply, Field Install, Commission, Repair, and Service 125 mm Armour Piercing Fin Stabilised Discarding Sabot (APFSDS).
(c)	Transfer of improvements/modifications/developments/up gradations to be carried out by the Prospective Partner during the period of proposed Agreement for taking care of new market requirements and obsolescence. Subsequent updates required due to component obsolescence or updates implemented by Prospective Partner(s) due to safety consideration would also be provided.
(d)	<p>Assistance in planning & establishing the new manufacturing, assembly and testing facilities & processes/ suitable augmentation at BHEL's existing facilities/processes by way of expert advice in terms of identifying, sizing & selection and preparation of specification of equipment / machinery required for manufacturing, their layout and foundation etc.</p> <p>Deputation of Partner's expert for commissioning of the manufacturing facilities, design of special tools and dies, jigs & fixtures etc.</p>
(e)	Support through engineering services from Partner's design office / manufacturing facilities for licensed products.
(f)	Training of BHEL engineers in Designing & Development, Engineering, Manufacturing, Testing, Supplying, Field Install, Commissioning, Repairing and Servicing 125 mm Armour Piercing Fin Stabilised Discarding Sabot (APFSDS).
(g)	Deputation of Partner's experts to assist BHEL in absorbing the technology for licensed products.
(h)	Transfer of applicable Proprietary hardware / software/computer programs including logics and source code.
(i)	Technology being proposed should be the latest/ state-of-the-art being marketed by the Prospective Partner.
(j)	Transfer of information to enable BHEL to source/procure those items, which Prospective Partner sources from other vendors (as these are not manufactured by the Prospective Partner for use in 125 mm Armour Piercing Fin Stabilised Discarding Sabot (APFSDS).



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Signature & Seal:

Authorized Signatory of the Prospective Partner

Annexure-2

Prospective Partner 's Experience in the field of 120/ 125 mm APFSDS

SN	Requirement	Prospective Partner's response YES/NO and remarks, if any
(a)	Whether the Prospective Partner is an Original Equipment Manufacturer (OEM) / designer of 120/ 125 mm Armour Piercing Fin Stabilised Discarding Sabot (APFSDS).	
(b)	Whether Prospective Partner is meeting below mentioned PQR (as per clause 3.5 of this EoI) and whether documentary evidence to substantiate the PQR submitted: i. Prospective Partner either on its own or along with its consortium partner(s) should have designed, manufactured, assembled, tested and supplied at least 1000 nos. of 125 mm Armour Piercing Fin Stabilized Discarding Sabot (APFSDS) having 460 mm penetration depth in last 15 years from the date of closing of EoI.	
(c)	Whether information on market share has been enclosed.	
(d)	Whether Prospective Partner's detailed reference list have been enclosed.	
(e)	Whether Prospective Partner's annual audited financial reports for last 3 years have been enclosed.	
(f)	Whether the technology transfer is the latest being marketed by the Prospective Partner.	
(g)	Whether customers (end users) letters / documentary evidence for satisfactory operation of APFSDS which is being offered to BHEL under this EoI have been enclosed.	
(h)	Whether Prospective Partner's has been blacklisted / banned business dealings by any Government Department of India.	
(i)	Whether Prospective Partner's any previous contract has been terminated either in full or part due to OEMs/Prospective partner (s) 's failure.	



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(j)	Whether Prospective Partner's has suffered insolvency / bankruptcy.	
(k)	Whether Prospective Partner's have positive net worth as of last three financial years.	
(l)	Whether the Prospective Partner owns the IPRs for the technology being proposed for transfer under the Technology Partnership Agreement (TPA) 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:
Authorised Signatory of the Prospective Partner



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Annexure-3

**General technical specifications of 125 mm Armour Piercing Fin Stabilised
Discarding Sabot (APFSDS)**

Specifications	Remarks
APFSDS should be capable of being fired from the existing 125mm 2A46 (T-72) & 2A46M (T-90) barrels.	
APFSDS Ballistics and properties should conform to Gun Barrel Design and must be compatible with existing Fire Control system (FCS) of T-72/T-90 tanks. The integration of ballistic data with existing ballistic computers to exploit the ammunition with existing sighting system & FCS.	
APFSDS must conform to the existing barrel designs and designated spaces within fighting compartment (including Rotary Conveyor). The round must be two-piece ammunition as per the existing design for T-72 & T-90 tanks. The ammunition must allow stowage by Auto Loader and within the existing space.	
Depth of Penetration should be Minimum 530 mm at 60° from normal at 2000 mtrs.	

Signature & Seal:

Authorized Signatory of the Prospective Partner



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Annexure-4

Reference List: The Prospective Partner shall furnish a summary of the product reference as detailed below for major supplies of 120/125 mm APFSDS in last 15 years:

Sl. No.	Customer Name	Project name / Location	Product	Year of Supply	Rating of Equipment	Year of Commissioning

Signature & Seal:

Authorized Signatory of the Prospective Partner