



Bharat Heavy Electricals Limited
(A Government of India Undertaking)
New Delhi - 110049

Notice for Inviting

Expression of Interest for Selection of Technology Partner for
for development of Armoured Fighting Vehicle- Future Ready
Combat Vehicle (AFV-FRCV) for the Indian Army

EoI No: BHEL/AA/TL/0113

Date of Issue: Mar 29, 2025

Last date for submission of EoI response: Apr 19, 2025



Subject: Selection of Technology Partner for development of Armoured Fighting Vehicle- Future Ready Combat Vehicle (AFV-FRCV) for the Indian Army

1) Introduction

This Expression of Interest (EoI) seeks interest from Company(s)/Original Equipment Manufacturers (OEMs) who are willing to partner with BHEL on long term basis to address the requirements of the **development of AFV-FRCV** for the Indian Army under Make-I program of DAP 2020.

2) About Bharat Heavy Electrical Ltd (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 year 2023-24 was around US\$ 2.9 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., 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), Vogt Power International Inc, USA (for Heat Recovery Steam Generators) and Bhabha Atomic Research Centre (BARC) (for 50 kW Alkaline Water Electrolyser System for Hydrogen Production).

For more details about the entire range of BHEL's products and operations please visit our website <http://www.bhel.com>.



3) BHEL presence in Defence Sector:

Since 1994, BHEL has been manufacturing and supplying the 76/62 Super Rapid Gun Mount in collaboration with M/s Leonardo, Italy. It has also developed the Integrated Platform Management System for warships and supplied Armoured Recovery Vehicles to the Indian Army. Furthermore, BHEL has strong ties with ISRO and is a key manufacturer and supplier of space-grade Li-ion cells and batteries, satellite solar panels, hot-formed titanium shells & domes, and cryogenic tanks for space applications.

The company possesses expertise in castings and forgings for defense and strategic applications and has designed, engineered, and supplied critical components such as permanent magnet-based motors, frequency converters, bidirectional converters, alternators, mechanical auxiliaries, turbines, turbo-generators, and condensers for warships and submarines.

4) Pre-Qualification Requirement (PQR) for the prospective partner:

4.1 The Prospective Partner either on its own or along with its consortium partner(s) should have designed, manufactured and supplied Armoured Fighting Vehicle (Tracked), where such vehicle should be in active service as on date of EoI submission

Or

4.2 The Prospective Partner either on its own or along with its consortium partner(s) should have manufactured and supplied Armoured Fighting Vehicle (Tracked), where such vehicle should be in active service as on date of EoI submission

Or

4.3 The prospective partner should have designed & provided integration support for an Armoured Fighting Vehicle, where such vehicle should be in active service as on date of EoI submission

Or

4.4 The prospective partner either on its own or along with its consortium partner (s) should have designed, manufactured and supplied:

4.4.1 Turret system* including Main Gun System, Sighting System (with Fire Control System) for Armoured Fighting Vehicle;

Or

4.4.2 Hull assembly* including superstructure, Integrated Power Pack, Transmission system and mobility system for Armoured Fighting Vehicle (Tracked);

where such system should be in active service as on date of EoI submission

Note: Prospective Partner to submit “End User Certificate” or “Documentary Evidence”, while claiming the PQR

* Scope of Turret system and Hull assembly mentioned in 4.4 is not exhaustive in nature and is indicative only.



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

- 5.1 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.
- 5.2 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

6) EoI process

Interested company(ies)/OEM(s) having proven technology and meeting the Pre-qualification requirements as specified in clause 4 are requested to submit a response along with the following documents (in hard/soft copy) on or before Apr 19, 2025:

- i. Company background
- ii. Product catalogue
- iii. Completed copies of Annexure-1, Annexure-2 and Annexure-3
- iv. latest three years annual audited financial statements including auditor's report

Based on the responses received and discussions with be held with shortlisted parties to finalise the scope of the technology partnership.

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

7) Contact Details

The respondent shall submit signed copy of the EoI along with Annexures, supporting documents specified above in this EoI to the following official:

Additional General Manager
Corporate Technology Management
Bharat Heavy Electricals Limited
BHEL House, Siri Fort
New Delhi – 110049, India
Phone: +91 11 66337458 / 7213
Mobile: +91 9441176267 / +91 9818103430
Email: techeoi@bhel.in

8) Miscellaneous

8.1 Right to accept or reject any or all Applications

8.1.1 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 therefore. In the event that BHEL rejects or annuls all the applications, it may, at its discretion, invite all eligible OEMs/suppliers to submit fresh applications.

8.1.2 BHEL reserves the right to reject 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.

8.1.3 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.

8.2 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.

8.3 Governing Laws & Jurisdiction

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

Broad Technical requirements of the AFV-FRCV

Sl.	Specification	Parameters	Remarks
1.	Crew strength	Four (4)	
2.	Fire Power & Lethality	<ul style="list-style-type: none"> a. Main armament – min 120mm caliber b. Missile firing c. Fire control system with Automatic target detection and tracking system d. Lethality – Kinetic energy, Chemical energy, ATGM, LM e. Secondary armament <ul style="list-style-type: none"> i. Coaxial machine gun ii. Anti-aircraft machine gun – Remote Control Weapon Station f. Loiter munitions g. Ammunition storage h. Capable of countering – Kinetic energy rounds, Large caliber ATGMs, Small Anti-tank weapons, Guided and unguided artillery, IED, etc. i. Ammunition loading – Auto, Semi auto, Manual 	
3.	Survivability	<ul style="list-style-type: none"> a. Passive protection <ul style="list-style-type: none"> i. Tank belly – should survive Improvised Explosive Device ii. Protection against top attack iii. Modular Explosive Reactive Armour (ERA)/Non-explosive Reactive Armour which could be scalable b. Active protective system – Top attack protection, soft kill and hard kill systems c. Missile warning system d. Chemical, biological, Radiological, Nuclear protection (CBRN) e. Integrated fire detection & suppression system f. Stealth and signature management g. Smoke grenade discharges h. BLOS Strike capability 	
4.	Mobility	<ul style="list-style-type: none"> a. Engine Power: 1500 HP b. Power to weight ratio: Min 27:1 	
5.	Communication	Radio, Internal and external communication, tactical Wi-Fi network system	



6.	Niche Capabilities	<ul style="list-style-type: none">a. Human machine teamingb. Integrated Intelligence Surveillance & Reconnaissance (ISR) capabilityc. Ability to control Unmanned Ground Vehicles (UGV) and UAVs -on/off board drones and LMsd. Net centric warfare management systeme. 360° visionf. Navigationg. Cyber Warfare & Electronic Warfare (EW) Capability for soft-killing suicide dronesh. Vetronicsi. Integrated Battlefield Management System	
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Prospective Partner's Experience in Armoured Fighting Vehicles

Sl.	Requirement	Yes/No (with specific details)
(a)	Whether the Prospective Partner is an OEM/supplier of Armoured Fighting Vehicles?	
(b)	Whether the Prospective Partner either on its own or along with its consortium partner(s) should have designed, manufactured and supplied Armoured Fighting Vehicle (Tracked), where such vehicle should be in active service as on date of EoI submission?	
(c)	Whether the Prospective Partner either on its own or along with its consortium partner(s) should have manufactured and supplied Armoured Fighting Vehicle (Tracked), where such vehicle should be in active service as on date of EoI submission?	
(d)	Whether the prospective partner should have designed & provided integration support for an Armoured Fighting Vehicle, where such vehicle should be in active service as on date of EoI submission?	
(e)	Whether the prospective partner either on its own or along with its consortium partner (s) should have designed, manufactured and supplied: a. Turret* system including Main Gun System, Sighting System (with Fire Control System) for Armoured Fighting Vehicle; or b. Hull* assembly including superstructure, Integrated Power Pack, Transmission system and mobility system for Armoured Fighting Vehicle (Tracked); where such system should be in active service as on date of EoI submission?	
(f)	Whether the Prospective Partner owns the IPRs for the technology being proposed) or have unencumbered right from the owner of the IPRs to sub-license the technology, if applicable? If yes, a list of such IPRs is to be enclosed	
(g)	Whether the Prospective Partner confirmed the Transfer of essential technology to BHEL to enable BHEL to design, engineer, manufacture, assemble, quality control, test, supply, install, commission, repair, service, and retrofit state-of-the-art Armoured Fighting Vehicles?	



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Sl.	Requirement	Yes/No (with specific details)
(h)	Whether the Prospective Partner confirms its willingness to facilitate BHEL in establishing required manufacturing/assembly, integration and test facilities for Armoured Fighting Vehicles?	
(i)	How many Armoured Fighting Vehicles/ Systems have been supplied till date and year of induction for the latest product offered?	
(j)	Whether the prospective partner's Armoured Fighting Vehicle has been exported or licensed to other countries?	
(k)	Whether the prospective partner has the experience of establishing facilities/ owns facility for the carrying Maintenance, Overhaul and Repair (MRO) services for the Armoured Fighting Vehicles?	
(l)	Whether the prospective partner has the experience of providing training aggregates and technical training to end customers for the Armoured Fighting Vehicles?	
(m)	Whether the Prospective Partner has been blacklisted/banned business dealings for the Ministry of Defence or any Government Department of India as on date of EOI submission?	
(n)	Whether details of the company background, product catalogs have been enclosed?	
(o)	Whether the detailed reference list has been enclosed?	
(p)	Whether copy of the Prospective Partner's annual audited financial reports for the last 3 years has been enclosed?	
(q)	Whether a summary of experience & references has been enclosed?	

(SIGNATURE)



Annexure -3

Reference List: The Prospective Collaborator shall furnish a summary of their product reference as detailed below for major supplies:

Sl.	Year of Supply	Name of Customer	Description of AFV/ sub-system supplied	Remarks (Quantity, Order Value etc)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

(SIGNATURE)