

**INVITATION FOR EXPRESSION OF INTEREST (EoI) FOR
PROCUREMENT OF ARMAMENT UPGRADE FOR BMP-2/2K**

References : DPP 2016 (All amdts upto Nov 2019).

Appendices :

Appendix A : Tentative Timelines for MAKE-II Project: Armament Upgrade for BMP-2/2K.

Appendix B : Preliminary Service Qualitative Requirements Number 72 for Armament Upgrade for Infantry Combat Vehicle (ICV) BMP-2/2K (**To be physically collected by vendors from Member Secretary**).

Appendix C : Existing Performance Parameters (**To be physically collected by vendors from Member Secretary**).

Appendix D : Intellectual Property Rights Agreement.

Appendix E : Commercial Evaluation Criteria.

Appendix F : Technical Evaluation Criteria (**To be physically collected by vendors from Member Secretary**).

Appendix G : Additional Information Performa.

Appendix H : Confidentiality Agreement.

Appendix J : Correctness Certificate.

Annexure :

Annexure I to Appendix F : Technical Evaluation Compliance Matrix (**To be physically collected by vendors from Member Secretary**).

Annexure II to Appendix F : Detailed Questionnaire.

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Introduction

1. The terrain along our borders lends itself to conduct of large scale Mechanised operations and the belligerence of our adversaries on the borders, necessitate that our capabilities are adequately built up to match the threat. The battlefield illumination does not limit itself to specific ammunition but also to have inherent Night Fighting capability existing in each weapon system. The present equipment of Mechanised Infantry i.e BMP-2/2K was inducted into service in 1985 and has been the mainstay equipment of Mechanised Infantry since then. The armament system is Night Blind as on date and needs to be upgraded with modern sights thereby fulfilling the critical operational void.

Objective

2. The objective of this invitation of Expression of Interest (Eoi) is to seek responses from eligible Indian Vendors for **development of prototype and further procurement of the Armament Upgrade for BMP-2/2K.**

Layout

3. The Eoi has been covered under the following parts:-

- (a) Part I : General Information.
- (b) Part II : Scope of Project.
- (c) Part III : Evaluation Criteria.
- (d) Part IV : Procedure for Submission of Response to the Eoi.
- (e) Part V : Miscellaneous.

4. The nodal officer for this project for all queries/ clarifications/ coordination will be Secretary, Project Facilitation Team, Armament Upgrade for BMP-2/2K. Address and contact details of the nodal officer are given at **Paragraph 30 of the Eoi.**

PART I: GENERAL INFORMATION

5. **Categorisation.** The project is categorised as under:-

- (a) **Prototype Development Phase.** 'Make-II (Industry Funded)' as per Make-II Procedure, in accordance with Para 6 of Chapter-III A of DPP-2016.
- (b) **Procurement Phase.** 'Buy (Indian - IDDM)' with minimum 40% IC content in accordance with Para 5 of Chapter III-A of DPP-2016.

6. **Quantities.** The quantities sought for the project are:-

- (a) **Prototype Development Phase.** One prototype of Armament Upgrade for BMP-2/2K will be developed by each shortlisted DA(s) and will include:-
 - (i) 3rd Generation Thermal Imager based Gunner Sight.
 - (ii) 3rd Generation Thermal Imager based Commander Sight (Panoramic).
 - (iii) Modernised Fire Control System.
 - (iv) Automatic Target Tracker.
 - (v) Existing performance parameters of the Armament to be retained.

(b) **Procurement Phase.** Armament Upgrade for Quantity 811 x BMP-2/2K (including ESP and fitment) will be procured after successful finalisation of contract and same will include:-

- (i) 3rd Generation Thermal Imager based Gunner Sight.
- (ii) 3rd Generation Thermal Imager based Commander Sight (Panoramic).
- (iii) Modernised Fire Control System.
- (iv) Automatic Target Tracker.
- (v) Existing performance parameters of the Armament to be retained.

7. **Appreciated Timelines.** Tentative timelines for the project are as given at **Appendix A.**

PART II: SCOPE OF THE PROJECT

Existing In-Service Armament Sighting System of BMP-2/2K

8. The present armament sighting system in use is based on Image Intensifier Technology which has its limitations and is not fit for modern day warfare. Present system is also deficient of modernised Fire Control System and Automatic Target Tracker which adversely affects the **capability of BMP-2/2K to fight both during day and night**. All these aspects are critical requirements for Mechanised Infantry to operate in armour intensive battlefield. The capability being sought is to offset the existing deficiency in BMP-2/2K platform and thereby bringing it at par with other modern war fighting equipment of Indian Army.

Proposed Armament Upgrade of BMP-2/2K

9. The Armament Upgrade system is required for In-service BMP-2/2K and will include the following:-

- (a) 3rd Generation Thermal Imager based Gunner Sight.
- (b) 3rd Generation Thermal Imager based Commander Sight (Panoramic).
- (c) Modernised Fire Control System.
- (d) Automatic Target Tracker.
- (e) Existing performance parameters of the Armament to be retained.

10. **Preliminary Service Qualitative Requirements (PSQR) of the Proposed System.** PSQR No - 72 of the Armament Upgrade for BMP-2/2K is attached as **Appendix B.** The amplification of existing performance parameters as per Para 23 of PSQR No 72 is att as **Appendix C.**

Timelines and Critical Activities

11. Stages of the development and procurement process are given at Paragraph 9 of the Make-II Procedure as per Chapter III-A of DPP 2016.
12. Major activities in the procurement process will be as given below:-

Serial No	Activity	Remarks
(a)	Pre EoI Response Meeting	3 Weeks (tentative) after the issue of EoI to clarify the issues/ queries raised by participating firms to facilitate submission of EoI response.
(b)	Evaluation of EoI Responses	By PFT
(c)	Issue of Project Sanction Order for Development of Prototype	To shortlisted Development Agencies (DAs) meeting evaluation criteria.
(d)	Handing over of one BMP-2	To shortlisted DAs only
(e)	User Trial Readiness Review	(i) To confirm completion of design & development of prototypes as per PSQR No 72, prior to commencement of User Trials. (ii) More than one review may be conducted, as required. Dates will be promulgated by the PFT as per progress of the project.
(f)	Solicitation of Commercial Offers	Commercial RFP will be issued for submission of Commercial Offers prior to commencement of User Trials.
(g)	Conduct of User Trials and GS Evaluation	Will be conducted post successful completion of Design and development phase.

Development of Prototype and Trials

13. The composition and design of the **Armament Upgrade of BMP-2/2K** to meet the PSQR will be decided by respective DAs in conformity with Para 10 above. Any clarification related to functional or operational aspects of the equipment under development as sought by the DAs to meet the PSQR will be provided by the Project Facilitation Team (PFT).

14. After the prototype has been developed as per PSQR given at **Appendix B**, the PFT would carry out User Trial Readiness Review of the prototype (s) **based on PSQR and existing performance parameters as specified in Appendix C** and conversion of PSQR to GSQR before conduct of User Trials. Evaluation of the Armament Upgrade of BMP-2/2K will be carried out during the Field Evaluation Trials to validate the performance against the GSQR. **The SHQ will formulate the 'Trial Directive' which will address all issues for validating the 'Essential Parameters' and 'Desirable Parameters'. The enhanced performance parameters will be decided and mentioned in finalised GSQR.** Necessary technical literature pertaining to the design & material will be provided by the DAs for the User Trial Readiness Review and conduct of User Trials on the prototype.

15. **Access to the BMP-2/2K platform as deemed necessary will be provided to the shortlisted DAs for carrying out development of prototype. This will also include a handing over of one BMP-2 to each shortlisted vendor.**

Solicitation of Commercial Offers

16. A commercial Request for Proposal (RFP) for 'Buy (Indian-IDDM)' phase would be issued to shortlisted DA(s) prior to commencement of User trials for soliciting their commercial offers. Additional technical information/ documentation, as may be necessary including those related to indigenous content and IPRs would also be required to be provided by the vendors prior to the issue of commercial RFP.

Deliverables

17. The project will have the following deliverables:-

(a) **Prototype Development Phase.** One prototype for Armament Upgrade for BMP-2/2K will be developed by each shortlisted DA(s) and will include:-

- (i) 3rd Generation Thermal Imager based Gunner Sight.
- (ii) 3rd Generation Thermal Imager based Commander Sight (Panoramic).
- (iii) Modernised Fire Control System.
- (iv) Automatic Target Tracker.
- (v) Existing performance parameters of the Armament to be retained.

(b) **Procurement Phase.** Armament Upgrade for Quantity 811 x BMP-2/2K (including ESP and fitment) will be required to be procured after successful finalisation of contract and same will include:-

- (i) 3rd Generation Thermal Imager based Gunner Sight.
- (ii) 3rd Generation Thermal Imager based Commander Sight (Panoramic).
- (iii) Modernised Fire Control System.
- (iv) Automatic Target Tracker.
- (v) Existing performance parameters of the Armament to be retained including ESP and fitment.

(c) ESP to incl MRLS, SMT/STE etc.

(d) Fitment of armament upgrade on existing BMP-2/2K in field conditions/ Base Overhaul facility/ Production Facility.

(e) An appropriate Engineering Support Package (ESP) will be required for repair and maintenance of the equipment to include spare, Special Test Equipment/Special Maintenance Tools, training and technical literature to include user hand book, preservation instructions, complete equipment schedule, repair manual and technical manual. These will be provided with the equipment during the procurement phase.

List of Trials/ facilities to be provided

18. The following trials/facilities will be provided: -

(a) **Trials.** The trials will be conducted in three Phases: -

(i) **Phase – I : Developmental Trials.** This will include development of prototype of Armament Upgrade for BMP-2/2K in conformity to PSQR. The development trial will be carried out in two stages:-

(aa) **Stage-I.** On bench test.

(ab) **Stage -II.** Dynamic Trial on BMP-2/2K evaluated by PFT.

(ii) **Phase-II : Field Evaluation Trial (FET).** To evaluate indigenously developed Armament Upgrade for BMP-2/2K on NCNC basis and ascertain its suitability for induction in the Army. The PFT will also evaluate the performance & assess the suitability of Armament Upgrade for BMP-2/2K to meet functional, safety and maintainability requirements DGQA MET & EMI/ EMC trials shall also be conducted.

(b) **Safety Certificate.** Manufacturer will give a safety certificate before the commencement of trials. Stating the following: -

“Armament Upgrade for BMP-2/2K being offered to the Army for trials has been validated during Internal Validation Trials by manufacturer for safety. All the safety parameters are well within the design parameters, and this upgrade is safe for the Trial by the Army Crew”.

(c) **Facilities Provided.**

(i) **Trials BMP-2/2K.** 01 x BMP-2 will be provided for each **shortlisted** DAs in mechanically fit condition for development of prototype based on draw of lots and same will be used during Trial Evaluation. An acceptance certificate will be submitted by DA on taking over BMP-2/2K and fitness certificate will also be submitted by the DAs on maintainability of BMPs every month.

(ii) **Trial Crew.** Crew for Developmental & User Trials will be provided by SHQ. A crew training certificate will be submitted by the DAs on the training standard of the crew.

(iii) In case if any damage occurs to the **equipment / property / personnel's resulting from the modification/ testing of modifications by manufacturer/integrator, the manufacturer/integrator is liable to bear the expenses** of repair / replacement of the facility and all necessary insurance coverage for Army manpower shall be the responsibility of the **manufacturer/ integrator.**

(iv) **Repair, Recovery and Maintenance Facility.** Necessary repair, recovery and maintenance cover will be provided by the SHQ during FET.

Multiple Technological Solutions

19. Multiple technological solutions for the Armament Upgrade of the BMP-2/2K **will not be acceptable.**

Intellectual Property Rights (IPRs)

20. As per provisions of Para 47, Chapter IIIA of DPP-2016, the 'IPR Agreement' will be furnished by each EoI respondent at the time of submission of EoI responses as per format given at **Appendix D**. Further based on the prototype, a comprehensive list of design and documents to be informed subsequently will need to be submitted by the development agencies for verification by a **Committee of Experts**.

PART III: EVALUATION CRITERIA

Commercial Evaluation Criteria

21. Indian entity satisfying criteria given at **Annexure I** of the Make-II Procedure as per Chapter III-A DPP-2016 will be considered as an eligible "Indian Vendor" for the project. EoI respondents will furnish their response to the Commercial Evaluation Criteria as per **Appendix E**.

Technical Evaluation Criteria

22. The respondents to this EoI are required to furnish information about their Technical Capability as per **Appendix F** and its **Annexure I & II**.

23. **Indigenous Content**. The quantity of 40% Indigenous Content will be certified by vendor before the start of FET and will be evaluated on opening of commercial bids. Critical technology as committed by vendor in their proposal will mandatorily be including as part of Indigenous Content.

24. **Additional Information**. Additional information required to be furnished as part of the EoI response is given at **Appendix G**.

25. **Foreign Collaboration**. If the DA is collaborating/ plans to collaborate with a foreign technology provider, the nature of such collaboration and the technology areas being transferred must be stated in the response (please refer Paragraphs 12 & 13 of **Appendix G**).

PART IV: PROCEDURE FOR SUBMISSION OF RESPONSE TO THE EoI

26. The response to the EoI shall be submitted as per formats given at **Appendix D** through **Appendix J**.

27. **Guidelines for Submitting Eol Responses.**

(a) The responses should be submitted strictly as per the formats given in respective Appendices. Should a vendor need to mention any other information, a separate column/ row may be added.

(b) All responses and Appendices should be submitted in a single file/ folder. Supporting documents/ additional references should be submitted in a separate folder with proper reference mentioned against each parameter/ sub parameter in respective appendices.

(c) Any supporting document/ evidence without any reference to specific parameter of criteria will not form part of the assessment.

28. **Rejection Criteria for Selection as DAs.** The following may lead to rejection of Eol response:-

(a) Failure to meet Commercial Evaluation Criteria given at **Appendix E.**

(b) Failure to meet/ comply with the Technical Evaluation Criteria Specifications give at **Appendix F** and its **Annexure I & II.**

(c) Failure to offer compliance to any of the terms and conditions given in the Eol.

(d) Any other parameter of the response considered inadequate by the MoD, Government of India.

29. The Eol respondent shall submit **three (03) copies** of response to the Eol, clearly marking one copy as '**Original Copy**' and second & third as '**Duplicate Copy and Triplicate Copy**'. In the event of any discrepancy between them, the original copy shall govern/ prevail. Each page of the response will bear the signatures of the authorised signatory of the company. The DA shall also submit a soft copy of the response to this Eol in a CD/ DVD.

30. The envelopes shall be addressed as under:-

Secretary, Project Facilitation Team
Armament Upgrade of BMP-2/2K
 General Staff Branch
 Directorate General of Mechanised Forces
 Integrated HQ of MoD (Army)
 Room Number 529
 'A' Wing, Sena Bhawan
 DHQ PO, New Delhi-110011
 Tele/Fax: 9002110263, 7073077107
Email : dcat.321@gov.in

31. The response to this Eol must be submitted by **1700hr on 17 Sep 2020** (or six weeks from the date of issue of Eol) at the address mentioned above.

32. The Company will be required to sign and honour the 'Confidentiality Agreement' with MoD Govt of India. The 'Confidentiality Agreement' will be furnished by each Eol respondent at the time of submission of Eol responses as per format given at **Appendix H**.

PART V: MISCELLANEOUS

33. **Pre Eol Response Meeting**. Companies may submit written queries/ clarifications/ amplifications on specific issues within 10 days of the issue of Eol. A pre-response meeting will be held **within 3 Weeks (tentative)** after the issue of Eol to clarify the issue/ queries raised by the participating firms to facilitate submission of response. Date of pre-response meeting will be promulgated by the PFT.

34. Guidelines for penalties in business dealings with entities as promulgated by Government from time to time, will be applicable on procurement process & bidders.

35. The Pre-Contract Integrity Pact (PCIP), listed as detailed in paragraph 92 of Chapter II of DPP 2016, shall apply mutatis mutandis to the 'Buy (Indian-IDDM)' phase of 'Make' project.

36. Respondent would be subject to disqualification if they make false, incorrect, or misleading claims in their response to this Eol. A 'Correctness Certificate' as per the format at **Appendix J** will be furnished as part of the response.

37. Please acknowledge the receipt of this invitation for Eol.

File No:A/36062/AU-811/GS/ISE (MECH)

Dated : Sep 2020

Enclosures: **Appendices A to J & Annexure**

(Vikas Bhola)

Colonel

Secretary, Project Facilitation Team
Armament Upgrade BMP-2/2K

TENTATIVE TIME LINES FOR MAKE-II PROJECTS
“ARMAMENT UPGRADE FOR BMP-2/2K

Sr. No	Activity	Time in weeks from collegiate discussions (T₀)
1.	Categorisation and Accord of AoN	T ₀
2.	Issue of EoI	8
3.	EoI Response submission	6
4.	EoI response evaluation	5
5.	Issue of Project Sanction Order	2
6.	Design & development of prototype	52
7.	Conversion of PSQR to SQRs/ Solicitation of Commercial offer	4
8.	User trials & Staff evaluation	8-26
Total		85-103 weeks

Appendix D
(Refer Para 20 of EoI)

INTELLECTUAL PROPERTY RIGHTS AGREEMENT

It is certified that 100% Intellectual Property Rights (IPR) for the design of the Armament Upgrade of BMP-2/2K is the property of M/s_____.

It is acknowledged that the company will be disqualified from further participation if any information provided is found to be incorrect.

Signature with Company Seal

COMMERCIAL EVALUATION CRITERIA

1. **Name of the Vendor:** _____
2. **Evaluation Criteria.**

<u>S</u> <u>No</u>	<u>Criteria</u>	<u>Vendor</u> <u>Submission</u>	<u>Reference</u> (Reference against vendor claim/ response must be flagged and mentioned in this column)	<u>Remarks (if</u> <u>Any)</u>
(a)	Nature of the Company [refer Para 1 (i) of Annexure I of Appendix A of Chapter IIIA of DPP-2016].			
(b)	Ownership Status [refer Para 1 (ii) of Annexure I of Appendix A of Chapter IIIA of DPP-2016].			
(c)	Category of Industry (Large/ Medium/ Small/ Micro).			
(d)	Registration Details.			
(e)	Credit Rating.			
(f)	Present Net Worth.			

Station:

Signature

Company Seal

Date:

Note:-

1. All submissions must be supported by referenced documents duly authenticated.
2. Any input with incorrect or missing reference will not be assessed.

ADDITIONAL INFORMATION PERFORMA

1. Name of the Company.
2. Name of CEO with Designation.
3. Address of the Registered Office.
4. Address of the Factory/Factories.
5. Company Website(s).
6. Date of Incorporation.
7. Brief History of the Company.
8. Category of Industry (Large/ Medium/ Small/ Micro).
9. Nature of Company (Public Limited/ Private Limited).
10. Nature of Business (Manufacturer/ Trader/ Sole Selling or Authorised Agent/ Dealer/ Assembler/ Processor/ Re packer/ Service Provider). Please give broad product range as applicable.
11. Details of Current Products:-
 - (a) Type/ Description.
 - (b) Licensed/ Installed Capacity.
 - (c) Annual Production for Preceding 3 Years.
12. Details of Foreign Collaborations if any planned for execution of project.
13. Technology Received from abroad and assimilated/ planned for execution of project.
14. Critical Technology being brought into the country.
15. Products Already Supplied:-
 - (a) To Indian Army/Air Force/Navy.
 - (b) PSUs.
 - (c) DRDO and its Laboratories.
 - (d) Ordnance Factories.

- (e) Any other Defence Organisation.
 - (f) To other Principal Customers.
16. Details of Developmental Facilities:-
- (a) R&D Facilities Available.
 - (b) Number of Technical Manpower.
 - (c) Percentage of Total Turn-Over Spent on R&D during the Last Three Years.
17. Turn-Over during the last Three Financial Years.
18. Any other relevant information.
19. Contact Details of the Executive nominated to co-ordinate with the Assessment Team (please provide telephone, mobile and e-mail address).

Appendix H
(Refer Para 32 of EoI)

CONFIDENTIALITY AGREEMENT

The company understands the security sensitivity of operational equipment. No information pertaining to deployment and usage of the equipment including scaling will be discussed with any third party without required permission from the Project Facilitation Team. The company understands that failure to observe this agreement will lead to disqualification from the project.

Signature with Company Seal

Appendix J
(Refer Para 36 of Eol)

CORRECTNESS CERTIFICATE

It is certified that information submitted in the documents as part of the response to Expression of Interest for the project of **Armt Upgrade of BMP-2/2K (Qty-811)** is correct and complete in all respects. It is acknowledged that the company will be disqualified from further participation if any information provided is found to be incorrect.

Signature with Company Seal