



सत्यमेव जयते  
Ministry of Defence  
Government of India

This document is the property of Government of India/Ministry of Defence.  
The contents of this RFP must not be disclosed to unauthorised persons and must be used only for the purpose of submission of Bids.

**This document contains 101 pages including cover page and Appendices.**

Tele : 91-11-23012146  
Fax : 91-11-23792414  
E mail: [tmls-mod@nic.in](mailto:tmls-mod@nic.in)

File No : 75961/GS/WE/AD Guns & Amn/RFP

Additional Director General  
Acquisition Technical (Army)  
Room No 30, D II Wing, Sena Bhawan  
New Delhi-110011

14 Oct 2021

To

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**REQUEST FOR TECHNICAL AND COMMERCIAL PROPOSAL FOR  
PROCUREMENT OF QUANTITY 220 AIR DEFENCE GUNS AND AMMUNITION  
CATEGORY: BUY AND MAKE (INDIAN)**

Dear Sir/Madam,

1. The Ministry of Defence, Government of India, intends to procure **Quantity 220 Air Defence Guns and ammunition** and seeks participation in the procurement process from prospective Bidders subject to requirements in succeeding paragraphs.

**Synopsis**

2. **Broad Description of Equipment/System.** Quantity 220 Air Defence Guns and quantity 141576 rounds of ammunition are being procured under Buy and Make (Indian) Category. Upto 25 guns and 44440 rounds of ammunition (7000 Standard ammunition and 37440 advanced ammunition) will be procured under 'Buy' portion while balance 195 Guns and 97136 rounds of standard ammunition through the Make portion of the contract. In case of indigenously designed guns, Vendor may offer 100% quantity of guns or ammunition or both under 'Make portion'. 3. The salient aspects and timelines of the acquisition are tabulated below. In case of any variation in the details furnished below or in any Annexures(s) with that mentioned in the RFP, information furnished in the main body of the RFP at referred Paragraph is to be followed.

Ser No.	Description	Details	Reference Para of the RFP
(a)	Equipment/System required	Air Defence Guns and Ammunition	Para 2 of this covering letter
(b)	Quantity Required	220 Guns and 141576 rounds of ammunition (37440 programmable and 104136 standard rounds)	Annexure V to Appendix G of RFP
(c)	Categorisation of	Buy and Make (Indian)	Para 2 of this covering

	Procurement		letter
(d)	Minimum IC Content required	Minimum of 50% IC is required on cost basis of the Make portion of the contract less taxes and duties	Para 7 of RFP
(e)	Place(s) of Delivery	Guns and Equipment including ESP – COD Jabalpur  Ammunition – CAD Pulgaon	Para 1.1 of Appendix G of RFP
(f)	Warranty Period	24 Months	Para 11 of RFP and Appendix C,
(g)	IPBG Amount	25 Crores	Para 20 of RFP and Annexure I of Appendix J,
(h)	Last date for submission of Pre-bid queries	11 Nov 2021	Para 24 of RFP
(j)	Date and time for Pre-bid meeting	25 Nov 2021, 1500 hrs	Para 25 of RFP
(k)	Last date and time for Bid Submission	06 Jan 2022, 1500 hrs	Para 26 of RFP

4. This Request for Proposal (RFP) consists of following four parts:-

Ser No.	Description	Page No.
(a)	Part I – General Requirements	6
(b)	Part II - Technical Requirements	13
(c)	Part III – Commercial Requirements	21
(d)	Part IV – Bid Evaluation and Acceptance Criteria	22

- 5.

The Government of India invites responses to this request only from Indian Firms in tie up with Original Equipment Manufacturers (OEM) or Authorised Vendors or Government Sponsored Export Agencies (applicable in the case of countries where domestic laws do not permit direct export by OEM) subject to the condition that in cases where the same equipment is offered by more than one of the aforementioned parties, preference would be given to the OEM. In case a Bidder desires to offer more than one equipment (Air Defence Gun), the same to be based on different technological solutions and separate bids will be submitted by the Bidder and each offer will be evaluated separately at each stage.

6. The end user of the equipment is the **Indian Armed Forces**.

7. This RFP is being issued with no financial commitment; and the Ministry of Defence reserves the right to withdraw the RFP and change or vary any part thereof or foreclose the

procurement case at any stage. The Government of India also reserves the right to disqualify any Bidder should it be so necessary at any stage on grounds of National Security.

8. This RFP is non-transferable.

9. In addition to various Appendices and their Annexures, attached with this RFP, reference to various paragraphs of DAP-2020 has been made in the RFP. The DAP -2020 is an open domain document that is available at Gol, MoD website [www.mod.nic.in](http://www.mod.nic.in).

Yours faithfully



(SK Patnaik)  
Colonel  
Director D,  
O/o ADG Acq Tech (Army)

## **INDEX**

	<b><u>Description</u></b>	<b><u>Reference</u></b>
	Disclaimer	5
	Part I of RFP – General Requirements	6
	Part II of RFP – Technical requirements	13
	Part III of RFP – Commercial Requirements	21
	Part IV of RFP – Bid Evaluation and Acceptance Criteria	22
Appendix A	Operational Characteristics and Features	23
Appendix B	Compliance Table	27
Appendix C	Warranty Clause	28
Appendix D	Certificate: Malicious Code	30
Appendix E	Repair and Maintenance Philosophy	31
	Annexure I      Manufacture’s Recommended list of Spares	40
	Annexure II     List of SMT/STEs, Jigs, Fixture and Infrastructure	42
	Annexure III    Technical Literature	43
	Annexure IV    Training Aggregates	45
Appendix F	Trial Methodology	46
	Annexure I      Detailed Trial Methodology	49
Appendix G	Commercial Clauses	56
	Annexure I      Guidelines for protecting ERV in contracts	61
	Annexure II     Bank Guarantee Format for Advance	63
	Annexure III    Bank Guarantee Format for PWBG	65
	Annexure IV    Format for extension of Delivery Period/Performance Notice	67
	Annexure V     Delivery Schedule and Stages of Payment	69
Appendix H	Bid Evaluation and Acceptance Criteria	72
Appendix J	Standard Conditions of RFP	77
	Annexure I      Pre Contract Integrity Pact	82
	Format for IPBG	90
Appendix K	Criteria for Vendor Selection/Pre-Qualification	92
Appendix L	Guidelines for Submission of Draft ATP	94
Appendix M	Check-Off list – Documents to be submitted	101
Appendix N	Glossary	102

**Disclaimer**

This RFP is neither an agreement and nor an offer by the MoD to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in submitting their proposals pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the MoD in relation to the Project. This RFP document and any assumptions, assessments and statements made herein do not purport to contain all the information that each Bidder may require. The Bidder shall bear all its costs associated with or relating to the preparation and submission of proposal pursuant to this RFP. Wherever necessary, MoD reserves the right to amend or supplement the information, assessment or assumptions contained in this RFP. The MoD reserves the right to withdraw the RFP or foreclose the procurement case at any stage. The issuance of this RFP does not imply that the MoD is bound to shortlist a Bidder for the Project. The MoD also reserves the right to disqualify any Bidder should it be so necessary at any stage on grounds of National Security.



## **PART I – GENERAL REQUIREMENTS**

1. This part consists of the general requirement of the Goods (also referred as equipment/systems/deliverables) and Services, hereafter collectively referred as 'Deliverables', the numbers required, the time frame for deliveries, conditions of usage and maintenance, requirement for training, Engineering Support Package (ESP), and warranty conditions, etc. It includes the procedure and the date & time for submission of bids.

### **Non-Disclosure**

2. The Bidding documents, including this RFP and all attached documents provided by the MoD, are and shall remain or become the property of the MoD. These are transmitted to the Bidders solely for the purpose of preparation and the submission of a proposal in accordance herewith. Bidders are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their proposal. The provisions of this Para shall also apply mutatis mutandis to Bids and all other documents submitted by the Bidders, and the MoD will not return to the Bidders any proposal, document or any information provided along therewith (except unopened Commercial Bid and IPBG, as relevant).

3. Information relating to the examination, clarification, evaluation and recommendation for the Bidders shall not be disclosed to any person who is not officially concerned with the process, or concerning the Bidding Process. The MoD will treat all information, submitted as part of the Bid, in confidence and will require all those who have access to such material to treat the same in confidence. MoD may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or MoD or as may be required by law or in connection with any legal process.

4. **Confidentiality of Information**. No party shall disclose any information to any 'Third Party' concerning the matters under this RFP generally. In particular, any information identified as 'Proprietary' in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to the sub-contractors, consultants, advisors or the employees engaged by a party with equal force.

### **Business Eligibility**

5(a). **Undertaking by Bidders**. The Bidder will submit an undertaking that they are currently not banned / debarred / suspended from doing business dealings with Government of India / any other government organisation and that there is no investigation going on by MoD against them. In case of ever having been banned / debarred / suspended from doing business dealings with MoD/any other government organization, in the past, the Bidder will furnish details of such ban / debarment along with copy of government letter under which this ban / debarment / suspension was lifted / revoked. The Bidder shall also declare that their sub-contractor(s)/supplier(s)/technology partner(s) are not Suspended or Debarred by Ministry of Defence. In case the sub-contractor(s)/supplier(s)/ technology partner(s) of the

Bidder are Suspended or Debarred by Ministry of Defence, the Bidder shall indicate the same with justification for participation of such sub-contractor(s)/supplier(s)/ technology partner(s) in the procurement case.

5(b). Subsequent to submission of bids if any sub-contractor(s)/supplier(s)/technology partner(s) of the Bidder is Suspended or Debarred by Ministry of Defence, the Bidder shall intimate the Ministry of Defence regarding Suspension or Debarment of its sub-contractor(s)/supplier(s)/technology partner(s) within two weeks of such order being made public.

6. **Pre-Qualification Criteria {for multi-vendor cases in Buy (Indian-IDDM), Buy (Indian) and Buy & Make (Indian) cases}**. The detailed Pre-Qualification criteria for the Bidders for participation in the instant procurement case are placed at **Appendix K** to this RFP. All Bidders are to submit details as per the criteria along with the Technical Bids. These would be evaluated by the TEC. Bidders to certify compliance with Para 20 of Chapter I of DAP 2020 separately.

7. **Indigenous Content**. For the purposes of this RFP and the acquisition contract (if any) signed by the Ministry of Defence with a successful Bidder, indigenous content shall be as defined under **Para 8 to 12 of Chapter I** and **Para 1 of Appendix B to Chapter I** of DAP 2020. In addition, reporting requirements for prime (main) Bidders (and for sub-contractors/suppliers/technology partners reporting to higher stages/tiers) shall be as prescribed under **Para 4 to 7 of Appendix B to Chapter I** of DAP 2020. The right to verification of Bidder/ sub-contractors/suppliers/technology partners shall vest in the Ministry of Defence as prescribed under **Para 10**; and aspects of delivery, certification, payments, withholding of payments and imposition of penalties shall be as prescribed under **Para 11 to 15** thereof. Furthermore, Bidders in 'Buy (Indian IDDM)', 'Buy (Indian)', 'Buy and Make (Indian)', Buy (Global-Manufacture in India) and Buy (Global) (for Indian vendors) will be required to submit their indigenisation plan in respect of indigenous content as stipulated in **Para 4 to 6 of Appendix B to Chapter I** and **Para 39** of Chapter II of DAP 2020. The DAP 2020 is available at MoD, Gol website ([www.mod.nic.in](http://www.mod.nic.in)) for reference and free download.

8. **Year of Production**. Deliverables [platforms (including major equipment)/ equipment/ systems] supplied under the contract should be of latest manufacture i.e manufactured after the date of Contract with unused components/assemblies/sub-assemblies, conforming to the current production standard and should have 100% of the defined life [at the time of delivery. Deviations, if any, should be clearly brought out by the Bidder in the Technical Proposal.

9. **Delivery Schedule**. The delivery schedule of equipment and services along with the relevant payment stages is specified at **Annexure V to Appendix G**.

10. Once the contract is concluded and the delivery schedule is established, the Bidder shall adhere to it and ensure continuity of supply of deliverables and their components under the contract.

11. **Warranty**. The deliverables supplied shall carry a warranty for 24 months . Commencement of warranty will be from the date of acceptance post JRI . Warranty Clause is given at **Appendix C** to this RFP.



12. **In Service Life/Shelf Life.** The In Service Life of guns shall be 25 years. Shelf life of ammunition will be atleast 10 years, which may be extendable after inspection by competent authority.. In case of shelf life, the relevant storage conditions should be clearly specified. Permissible Stacking parameter for both types of ammunition to be specified. In case of electronic fuze, shelf life should be separately specified in storage condition and controlled storage condition. The Bidder is required to give details of reliability model, reliability prediction and its validation by designer/manufacturer to ensure reliability of stores throughout Service/shelf life. The efficacy of reliability model/prediction/validation would be verified during technical and environmental evaluation as indicated in **Para 40** of this RFP. Vendor should give the methodology along with the procedures (e.g. chemical /static / dynamic testing) for extension of shelf life, once the shelf life has expired and provide realistic maximum extended shelf life as per the product engineering design/document. Designer / supplier also to specify maximum extendable shelf life beyond the assigned shelf life of major components. Methodology of assessment of shelf life of ammunition and expendable items and its extension to be provided by the vendor along with Technical Bid. Details of chemical components along with breakdown methodology are required to be provided by vendor.

13(a). **Product Support.** The Bidder would be bound by a condition in the contract that he is in a position to provide product support in terms of maintenance, materials and spares for a minimum period of 25 years from the time last unit is produced under present proposal. Even after the said mandatory period, the Bidder would be bound to give at least two years notice to the Government of India prior to closing the production line so as to enable a Lifetime Buy of all spares before closure of the said production line. This, however, shall not restrict the Buyer from directly sourcing sub-equipment/sub-assembly and spares from their respective OEMs/sub-vendors on completion of warranty. In case the sub-equipment/sub-assembly/parts require tuning/calibration/integration by the Bidder prior replacement, the same is to be undertaken by the Bidder at fair and reasonable cost, as mutually agreed between Buyer and Bidder. During Defect Investigation (DI), the vendor will associate with the concerned AHSP till the equipment is in service. RCA (Root Cause Analysis) of defect/accident to be carried out by Vendor. The vendor shall provide comprehensive Defect Investigation Methodology. Vendor shall provide comprehensive Defect Investigation Team during investigation of any defect/accident that occurs within guaranteed shelf life and provide all the inputs and assistance as required by the Defect Investigation team. Defect investigation will be in accordance with JSG 0309/2019.

13(b). **Codification.** The Bidder agrees to provide existing NATO Stock Numbers (NSNs) of OEM for each item supplied under the contract as per part list (including MRLS). In case, the NSNs are not available, the bidder agrees to codify using basic technical characteristics as required for codification in consultation with MoD/Directorate of Standardisation. In case of IPR issues, codification will be undertaken as Type IV codification (where only the manufacturer details and part number are to be provided).

14. **Obsolescence Management Plan.** An actionable obsolescence management plan is to be proposed by the Bidder along with the mechanism for intimation of notification of obsolescence. The modalities of the mechanism for intimation of notification would be deliberated during CNC. The mutually agreed mechanism for intimation would form an integral part of the contract. All upgrades and modifications carried out on the equipment during the next 25 years or during its life cycle (as per requirement) must be intimated to Capability Development Directorate (CD-11), IHQ of MoD (Army), Gol as per the agreed

mechanism. Technology Obsolescence Management will be carried out as per Para 108 of Chapter II as well as Chapters VI and Chapter XI of DAP 2020.

15. **Training of Crew and Maintenance Personnel.** A training package for training of operators, operator trainers and maintenance personnel to undertake operation and maintenance of equipment, along with tools and test jigs and training of QA personnel for Quality Assurance of equipment would be required to be carried out in English language and Hindi language. This training shall be designed to give the operators and maintainers necessary knowledge and skills to operate & maintain equipment (Unit, Field, Intermediate and Base Level Maintenance). The Block Syllabus and details of training to be conducted to be decided by AAD Directorate (Equipment), EME Directorate (Arty & Soldier System) and the vendor. The syllabus for maintenance personnel will be defined by the Bidder in consultation with the Buyer at the time of MET. The maintenance training will be imparted to the satisfaction of the Buyer and Bidder will ensure that the training content and period will be to impart working proficiency up to the required level. All training requirements such as training aids, projection system, complete equipment with accessories / optionals, technical literature, spares, test equipment / test set up, charts, training handouts, power point presentations, Computer Based Training (CBT), Documentation, Simulators etc will be catered by the Bidder.

16. The Bidder would provide the following training to the personnel of the Buyer based on agreed terms of contract. Training will be carried out within India for a minimum duration of 12 working days each:-

Ser	Type of Training	Location	Duration (Working Days)	No of Batches	Total No of Personnel	Remarks
(a)	Operator Training	Vendor Premises	Minimum 12	03	50	06 Offrs & 12 Other Ranks in First Batch bal in next two batches 06 months apart.
(b)	<b><u>Maintenance Training (Field Level)</u></b>					
(i)	Armament Portion	EME School	28	02 (16/17 pers per batch)	33	
(ii)	Optronic Portion	EME School	14	01	13	
(c)	<b><u>Maintenance Training (Base Level)</u></b>					
(i)	Armament Portion	Vendor Premises	42	01	09	
(ii)	Optronic Portion	Vendor Premises	21	01	07	
(d)	Quality Assurance	Vendor Premises	Minimum 12	02	15 (Guns) 16 (Ammunition)	
(e)	Ordnance	Vendor Premises	10	01	30	
	<b>Total No of Personnel</b>				<b>173</b>	

**Note:-**

- (i) The maintenance training should meet the needs of repair & maintenance of the complete equipment, SMTs/STEs, test set up, assemblies/sub-assemblies as per the stipulated repair philosophy. Maintenance training to be completed prior to completion of supply of first consignment.
- (ii) Quality assurance training batches to be planned so that first batch is trained prior to commencement of delivery of 'Buy Portion' of the contract and second batch before commencement of delivery of 'Make Portion'. For guns, three officers each from five AshSP will be trained.
- (iii) First lot of training to be completed prior to delivery of first batch.

17. **Government Regulations.** It may be confirmed that there are no Government restrictions or limitations in the country of the Bidder or countries from which subcomponents are being procured and/or for the export of any part of the deliverables being supplied.

18. It may be further confirmed that all national and international obligations relevant to transfer of conventional arms of the country of the supplier or countries from which parts and components are being procured, have been taken into account for the duration of the contract. Accordingly, thereafter there would be no review, revocation or suppression of Defence export license and other related clearance issues to the supplier for the contract that could impinge on the continuity of supply of items and their parts or components under the contract.

19. **Patent Rights.** The Bidder should confirm that there are no infringements of any Patent Rights in accordance with the laws prevailing in their respective countries.

20. **Integrity Pact.** In the subject RFP, the Bidder is required to sign and submit Pre Contract Integrity Pact (PCIP) given at **Annexure I** to **Appendix J** to this RFP and shall also deposit ₹ 25 Crores as Integrity Pact Bank Guarantee (IPBG) through any of the instruments mentioned therein. This would be submitted in a separate envelope clearly marked as 'IP and IPBG' at the time of submission of Technical and commercial offers. The Beneficiary Bank Details for furnishing IPBG are as follows:-

(IFSC Code - SBIN0000691)

State Bank of India

New Delhi Main Branch

C Block, 11 Parliament Street

New Delhi, Pin: 110001

21. **Absorption of Critical Technologies.**

(a) The Indian Vendor will ensure absorption of under mentioned critical technologies:-

Ser No	Critical Technology
(i)	<b><u>Ordinance</u></b>
	(aa) <b><u>Barrel.</u></b> Material, manufacturing technology including Rifling.
	(ab) <b><u>Breech Mechanism.</u></b> Material and manufacturing technology including obturation technology.
	(ac) <b><u>Recoil System.</u></b> Material and manufacturing technology.
	(ad) <b><u>Ammunition Loading System.</u></b> Auto ammunition loading and handling system.
(ii)	<b><u>EOFCS.</u></b> Fire control system, system integration, TI sight (cooled), target tracking capability, fire control computer with software.
(iii)	<b><u>Servo System.</u></b> Gun control system.

(b) Vendor to submit a detailed **Indigenisation and Technology Absorption Plan** for above technologies alongwith timelines and Gantt Chart as part of the Technical Bid, in accordance with Para 39 of Chapter II of DAP 2020. To have a fair assessment of the depth of technology being absorbed, vendor will classify technologies into categories as specified in Para 1 (k) of **Appendix F to Schedule I to Chapter II of DAP 2020**. Depth of technology absorption will be in accordance with **Para 2 (IM Kit Based) of Appendix F to Schedule I to Chapter II of DAP 2020**. In case of incremental absorption of listed technologies is being recommended, Vendor will submit clear timelines for absorption of each technology.

(c) Absorption of critical technologies will be evaluated by process audit as per mutually finalised timelines. Broad guidelines and methodology for checking the absorption of critical technologies will be formulated by a **Board of Officers (BOO)** and intimated to the L1 vendor at the time of signing of contract.

(d) The absorption of Critical Technology by L1 vendor will be physically checked for compliance by separate **Board of Officers (BOO) comprising members from DRDO and SHQ**. The IC Content and absorption of critical technologies achieved by vendor for complete contract will be verified by the Board of Officers after completion of all deliveries.

22. **Fall Clause.** If the equipment being offered by the Bidder has been supplied/contracted with any organisation, public/private in India, the details of the same may be furnished in the technical as well as commercial offers. The Bidders are required to give a written undertaking that they have not supplied/is not supplying the similar systems or subsystems at a price lower than that offered in the present bid to any other Ministry/Department of the Government of India and if the similar system has been supplied at a lower price, then the details regarding the cost, time of supply and quantities be included as part of the commercial offer. In case of non-disclosure, if it is found at any stage that the

similar system or subsystem was supplied by the Bidder to any other Ministry/Department of the Government of India at a lower price, then that very price, will be applicable to the present case and with due allowance for elapsed time, the difference in the cost would be refunded to the Buyer, if the contract has already been concluded.

### **Bid Timelines**

23. Any queries/clarifications to this RFP may be sent to this office by **11 Nov 21**. A copy of the same may also be sent to:-

Directorate General of Army Air Defence  
Room No 606, D1 Wing,  
Sena Bhawan  
New Delhi-110011  
Tele & Fax No: 011-23018551

24. **Pre-Bid Meeting.** A pre-bid meeting will be organised by SHQ at **1500 hrs on 25 Nov 21** at the address given at **Para 23** above to answer any queries or clarify doubts regarding submission of proposals. The Bidder or his authorised representative is requested to attend. Necessary details may be sent a week in advance to the address given at **Para 23** above, to facilitate obtaining of security clearance.

25. **Submission of Bids.** The Technical and Commercial Proposals along with IP and IPBG should be sealed separately in three separate envelopes clearly indicating Commercial/ Technical/ IP and IPBG, as applicable, and then put in one envelope and sealed **(all the envelopes should clearly state the letter No of RFP and the name of equipment and Bidder name)** and submitted to the undersigned at the following address by **1500 hours on 06 Jan 22:-**

**O/o ADG Acquisition Technical (Army)**  
**Room No 30, D-II Wing**  
**Sena Bhawan**  
**New Delhi-110011**  
**Fax No: 23792414**

26. Offer opening by a Offer opening committee will be held at **1100 hrs** on the next working day after the submission of bid at the same venue as indicated at **Para 25** above. The Bidder or his authorised representative is welcome to be present at the opening of the proposals. Necessary details may be sent at least one week in advance to facilitate obtaining of security clearance.

## **PART II – TECHNICAL REQUIREMENTS**

27. The second part of the RFP incorporates the aspects of SQRs describing the technical parameters of the proposed equipment, and the environmental parameters for functioning. The operational characteristics and features that should be met by the equipment are elucidated at **Appendix A** to this RFP and the Compliance Table at **Appendix B** to this RFP. The Bidder would be required to offer the equipment for field evaluation on a “No Cost No Commitment” basis.

28. **Operational Characteristics and Features.** The broad operational characteristics and features that are to be met by the equipment are elucidated at **Appendix A** to this RFP.

29. **Technical Offer.** The Technical Offer must enable detailed understanding of the functioning and characteristics of the equipment as a whole and each sub system independently. It must include the performance parameters as listed at **Appendix A** to this RFP and any other information pertaining to the technical specifications of the equipment considered important/ relevant by the Bidder. The technical proposal should also include maintenance schedules to achieve maximum life and expected life of each assembly/subassembly (or Line Replaceable Unit (LRU)/Shop Replaceable Unit (SRU)), storage conditions/environment condition recommended and the resultant guaranteed in-service/shelf life. The range and depth of spares included in the proposal should be supported by necessary reliability and prediction model or authenticated by past data on the similar equipment in use. These would be evaluated during FET. Any Bidder found to be providing lesser ESP/MRLS in terms of range and depth will have to make good the deficiency at no extra cost. The revised list of MRLS to this effect is to be submitted prior to Staff Evaluation.

30. If there is any associated optional equipment on offer that should also be indicated separately along with the benefit that are likely to accrue by procuring such optional equipment. Should the Bidder be contemplating any upgrades or modifications to the equipment being offered, the details regarding these should also be included in the Technical Proposal.

31. **Technical Details.**

(a) The technical details should be factual, comprehensive and include specifications of the offered system/equipment against broad requirements listed in **Appendix A** to this RFP.

(b) Insufficient or incomplete details may lead to rejection of the offer. Mere indication of compliance may be construed as incomplete information unless system's specific technical details are available in the offer. A format of the compliance table for the technical parameters and other conditions of RFP is attached as **Appendix B** to this RFP.

32. The technical offer should have a separate detachable compliance table as per format given at **Appendix B** to this RFP stating specific answers to all the parameters as listed at **Appendix A** to this RFP. It is mandatory to append answers to all the parameters listed in **Appendix A** to this RFP. Four copies of the Technical Proposal should be submitted (along with one soft copy), however only one copy of the commercial proposal is required.



33. **Malicious Code Certificate.** The Bidder is required to submit a '**Malicious Code Certificate**' (*only for Electronic items and Software*) along with the Technical Proposal. The format is placed at **Appendix D** to this RFP.

34. **Field Evaluation.** The Bidder is requested to confirm his willingness to provide the equipment for trial evaluation in India on "No Cost No Commitment" basis when so requested. The Buyer, at his own expense, will depute its representatives for the Field Evaluation trials (FETs). If any part of the FETs are conducted in the Buyer's facilities, the Bidder shall depute his personnel and equipment at his own expenses and bear the cost of all expenses of trials other than the cost of ranges, platform or facilities which the Buyer may choose to provide free of cost.

35. **Product Support (ESP/ LCSC).** After induction, the equipment/system would be repaired and maintained as per the repair and maintenance philosophy at **Appendix E** to this RFP. The information on Engineering Support Package that is required to be provided is enclosed at **Annexure I to IV to Appendix E** to this RFP. The details of LCSC proposals, if sought, must also be submitted separately by the Bidder with technical aspects being included in the technical offer and commercial aspects being included in the commercial offer. In case the Repair and Maintenance of equipment is through Life Cycle Support Contracts as specified at **Para 9-10 of Appendix E**, the Bidder would have to submit the complete Spare Parts list of equipment (not limited to MRLS) along with complete Repairable Parts list (in softcopy) in the Technical offer. The complete Spare Parts Price Lists, Repairs Price Lists and Man-day Rates of Specialists would have to be submitted in the Commercial offer. Negotiations for Long-Term Rate Contracts (5 years) for Spares, Repairs and Man-day rates of Specialists would be conducted concurrently with the (L1) Bidder.

36. **Spares.** The spares requirement will be as per **Appendix E** to this RFP. The spares are required to be categorized in four categories as follows:-

- (a) Manufactured by Bidder as OEM and can be sourced as per Part No.
- (b) Bought out items and customized by the OEM for the specific purpose and such customization would require OEM intervention.
- (c) Bought out from other OEMs/Third Party as specialised items and used without any customization. Such items can be sourced by quoting their Part No./Identification No. as given by OEM/Third Party and directly utilised.
- (d) General Engineering items/COTs which can be sourced by stating the relevant standards and item description.

37. As brought out at **Para 29**, the range and depth of spares included in the proposal should be supported by necessary reliability and prediction model or authenticated by past data on the similar equipment in use. These would be evaluated during FET. Any Bidder found to be providing lesser ESP/MRLS in terms of range and depth will have to make good the deficiency at no extra cost. The revised list of MRLS to this effect is to be submitted prior Staff Evaluation. The Buyer would also have the option to amend the MRLS proposed by the Bidder within **two** years of the expiry of the warranty period. The Bidders would either 'Buy Back' the spares rendered surplus or exchange them on cost to cost basis with the spares as required by the Buyer. The said spares would be purchased/ replaced by the Bidder, based on the prices negotiated in the contract. The 'Buy Back' clause would not be applicable for

additional spares included by the Buyer in MRLS during FET and SE stage, as brought out at **Para 29** of RFP.

38. **Active Technology Obsolescence Management**. Bidder is to indicate the methodology on how the Bidder intends to undertake Active Obsolescence Management through life cycle of equipment which would include upgradation of system/ subsystem/ units on completion of its fair service life. The Bidder/OEM shall also intimate Buyer on likely technology obsolescence of various sub-assemblies/units/modules of equipment through an Annual Bulletin. In case of impending obsolescence of components, bulletin should specify either alternate item or option for life-time buy as under:-

(a) The Bidder/OEM will notify the Buyer not less than two years before the closure of its production line about the intention to close production of equipment for provision of purchasing spare parts, before closure of the said production line.

(b) Three years prior to completion of design/service life of equipment, the Bidder/OEM will submit techno-commercial proposal for upgradation of equipment, wherever applicable, to mitigate technology obsolescence and for ensuring product support for next 15 years (or any other period as applicable).

### **Evaluation of Technical Offers**

39. The Technical Offer submitted by the Bidder will be evaluated by a Technical Evaluation Committee (TEC) to confirm that the equipment being offered meets the Essential Parameters as elaborated at **Appendix A**. Thereafter, the Bidder of the short listed equipment would be asked to provide the equipment ( Two Guns and adequate ammunition for trials) for trial evaluation as per trial methodology given at **Appendix F** to this RFP, in India at 'No Cost No Commitment' basis. The number of ammunition required for trials will depend on the equipment characteristics such as rate of fire etc. It is estimated that minimum of 25 effective engagements may be carried out by each gun in order to validate the various parameters. Therefore vendors should have adequate ammunition (standard and advanced as per vendor solution) for a minimum of 25 effective engagements. The vendors should also have adequate redundancy for a minimum of five additional engagements on account of any unforeseen contingency. These rounds will be over and above the ammunition required by DGQA for QA/QC tests as specified in Para 42 of the RFP.

### **Field Evaluation Trials**

40. For an equipment to be introduced in service, it is mandatory that it successfully clears all stipulated tests/trials/evaluations as per RFP. The trial evaluation process comprises of the following phases:-

(a) **User Trials**. These will involve functional testing by user of the equipment in various specified conditions as per requirement and may be done in more than one phase. Trials will be conducted only pertaining to conditions where the equipment is most likely to be deployed. In other conditions where the probability of deployment is not high, appropriate vendor certifications confirming the functional effectiveness under such conditions can be given and simulations based testing can be resorted to

wherever applicable. In case, equipment fielded requires any repairs/modifications during the course of trials, these in situ servicing, repair, maintenance actions or modifications as requested by the vendor will be permitted. Towards this, Vendors shall ensure availability of requisite maintenance teams/ experts onsite during the conduct of trials. Permission for trial equipment to move out of the trial location for a defined period for such repairs or modifications can be permitted on a case to case basis. In single vendor cases permission for the above may be permitted by the OIC Trials itself.

(b) **Technical Trials.** Technical trials will be conducted by QA agency as per Technical Evaluation Plan (to be specified at **Para 42** below) to assess conformance to the quality requirements, standards and specifications. Equipment/assemblies/sub-assemblies will be subjected to environmental tests wherever applicable. As far as possible, physical evaluation will only be carried out of critical parameters and other parameters will be evaluated based on vendor certification duly supported by test reports including Pre, In-situ and post performance checks after each environmental test by NABL accredited laboratories/internationally recognised laboratories. Towards this, Bidder will submit the technical documentation and draft ATP as part of technical bid or at least one month before commencement of FET. QA agencies will finalise ATP in respect of all Bidders during Technical trials.

(c) **Maintainability Evaluation Trial (MET).** MET to address maintenance, repair and spares support aspects of acquisition, wherever feasible, will be undertaken through the OEM documentation concurrent to the User Trials. Essential tests towards establishing maintainability would be undertaken to establish adequacy of maintenance tools, test equipment and spares utilisation. Actual stripping of the equipment to establish adequacy of maintenance tools, test equipment and spares utilisation will ideally be undertaken, where considered necessary by the Buyer. All MET aspects will be evaluated through physical assessment on equipment at MAG No 8, Jabalpur, to ascertain the maintainability of the equipment and adequacy of the Engineering Support Package (ESP) offered, to include MRLS, SMTs & STEs, Technical Literature and Training Aggregates. Training of MET Team will be organized by the vendor prior to conduct of MET. The vendor is also required to provide one set of technical literature as specified in Annexure III of **Appendix E** and one set of SMEs & STEs for MET.

(d) **EMI/EMC Evaluation.** This will consist of either review of reports of EMI/EMC tests already conducted as part of qualification testing from authorised labs or physical conduct of tests to ascertain compatibility. EMC/ EMI Evaluation would be carried out by designated testing centers like Army Center for Electromagnetics (ACE), Mhow etc. on parameters having direct bearing on the operational employability of the equipment based on desired standards as given out in the Trial Directive. For remainder parameters, certification of accredited labs can be accepted.

41. Commercial offers will be opened only of Bidders whose equipment is short-listed, after technical trials and evaluation. In other words, the equipment would be required to be trial evaluated and found suitable prior to commencement of any commercial negotiations.

## **Quality Assurance Instructions & Technical Evaluation Plan**

42. Bidder is to submit a Draft Acceptance Test Procedure (ATP) along with the Technical bid or at least one month before commencement of FET, as per the QA instructions and Technical Evaluation Plan. Based on the draft ATP, the ATP will be finalised by the Buyer's QA agency with Bidder during Technical Trials. ATP shall be included in the contract at the time of finalisation with successful bidder. ATP will lay down the tests to be carried out during PDI and JRI. It shall be ensured that there are no repetition of QA tests in PDI and JRI. The JRI would normally be restricted to quantitative checks only, except where check proof is required to be carried out. In case PDI/JRI are planned to be conducted by authorised Third Party Inspection (TPI) Agencies, the same will be spelt out in the QA instructions and the details included in the finalised ATP. QA of equipment will be carried out as per finalised QA plan in the contract. For technical trials by QA agencies, the Bidder will arrange for requisite test facilities at OEM premises/accredited laboratories/DGQA laboratories for establishing conformance. The successful Bidder would also be required to provide those test facilities at OEM premises/accredited laboratories for quality assurance, which are not available with QA agencies. Details of the same will be intimated to the Bidder during finalisation of ATP in Technical trials. Guidelines for framing of Draft ATP are given at **Appendix L** to this RFP.

## **Marking and Packaging**

43. **Marking of Deliverables.** The Bidder shall ensure that each deliverable is marked clearly and indelibly, as follows:-

- (a) In accordance with the requirements specified in the RFP or if no such requirement is specified, with the indicated codification number or alternative reference number specified.
- (b) Ensure that any marking method used does not have a detrimental effect on the strength, serviceability or corrosion resistance of the deliverables.
- (c) Where the deliverables have a limited shelf life, with the cure date/date of manufacture or expiry date expressed as months and years.
- (d) Along with main equipment, marking should also be made on the critical assemblies and sub-assemblies.
- (e) Where it is not possible to mark a deliverable with the required particulars, these should be included on the package in which the deliverable is packed.
- (f) Each package will be marked with indelible ink in English Language. Following to be clearly marked on the equipments:-
  - (i) Supply Order No. / Contract No.
  - (ii) SI No./Regd No.
  - (iii) Name of Manufacturer / monogram & date of Manufacture.
  - (iv) Complete description of the item / Gen Set with DS Cat/ Part No/ NSN No/Manufacturer Part No.
  - (iv) Governing Specification No.

- (v) CPCB compliance for Genset.
- (vi) Appropriate Mass.
- (vii) Broad Arrow Mark.
- (viii) The name and address of the consigner and consignee including delivery destination / address and transit destination / address.
- (ix) The description and quantity of the deliverables.
- (x) Statutory hazard marking (wherever applicable).
- (xi) Date of dispatch.

44. **Marking of Ammunition.** Each round shall be permanently marked by a head stamp impressed, stamped or embossed that identifies the manufacturer, the country and year of manufacture and a unique batch or lot number. Ammunition lot numbering should include year and month of manufacturing. Lot number to be marked on each round. Month and year of manufacturing of fuzes are also recommended to be marked on assembled fuzes. Different variants of ammunition should have separate marks for its identity in darkness /night.

(a) **Head stamp Markings on Ammunition, Cartridges Base and Shell.**

- (i) Shall consist of simple geometric symbols indicating Standard e.g. NATO or otherwise.
- (ii) Symbol indicating the country and year of manufacture in symbol / numeric form or alphanumeric code.
- (iii) Symbol indicating the presence of a traces combination with a numeric and /or alphanumeric code.
- (iv) Head stamp markings to be of a size that is readily legible to the naked eye.

(b) **Package Marking.** Wooden / Plastic / Metal boxes will be painted in olive green and bear stenciling in Golden yellow colour to show marking as follows:-

- (i) Calibre.
- (ii) Type of Rounds.
- (iii) Quantity Packed.
- (iv) Lot Number.
- (v) Manufacturer's initials/Month & Year of Manufacture of rounds.
- (vi) Case (Package)No.
- (vii) Weight of the Package with rounds.
- (viii) UN Hazard Division Labels.
- (ix) Compatibility Group.
- (x) Net explosive contents.

45. **Packaging of Deliverables.** The SELLER shall provide packaging and preservation of the equipment spares/goods contracted so as to ensure their safety against damage in the conditions of land, sea and air transportation, subject to proper cargo handling. The SELLER shall ensure that the stores are packed in containers which are sufficiently strong, waned with seasoned wood / steel boxes. The packing cases can be lifted by crane / forklift truck. Suitable packing arrangements should be provided for transportation and storage without causing damage to ammunition. The ammunition should be packed in hermetically sealed container. The containers should further be packed in outer boxes /

container /crates/boxes and further palletized for ease of handling and transportation. The Bidder shall pack or have packed the deliverables, as applicable:-

- (a) In accordance with DEFSTAN 81-041 (Part 1)/STANAG-4280 or equivalent Military Standard. For explosive/Ordnance stores relevant JSS 0253-01:1981 RA/Standards to be used as per the equipment technical specification to avoid damages in transit.
- (b) Vendor to ensure that each deliverable may be transported in an undamaged and serviceable condition. Warranty certificate to be provided in this regard.
- (c) Packing boxes of ammunition should allow stacking of upto 3.5 mt storages. Specification JSG 0102 will be relevant standard for ammunition and its packaging.

46. The Bidder shall ensure that each package containing the deliverable is labeled to include:-

- (a) The name and address of the consigner and consignee including
  - (i) The delivery destination/address if not of the consignee
  - (ii) Transit destination/address (for aggregation/disaggregation, onward shipment etc)
- (b) The description and quantity of the deliverables.
- (c) The full part number in accordance with codification details.
- (d) The makers part, catalogue, serial, batch number, as appropriate.
- (e) The contract number.
- (f) Any statutory hazard markings and any handling markings including the mass of any package which exceeds 3 kgs.
- (g) The Packaging Label (military J, N or P, special H, commercial A, C etc) (specify reference to DEFSTAN 81-041 (Part 1)/STANAG-4280 or equivalent Military Standard.)



### **PART III - COMMERCIAL REQUIREMENTS**

47. The third part of the RFP consists of the Commercial Clauses and Standard Clauses of contract. The bidders are required to give confirmation of their acceptance of these clauses.

#### **Commercial Bid**

48. The Bidder is requested to take into consideration the ***Commercial Clauses and Payment Terms*** given at **Appendix G** to this RFP while formulating the Commercial Offers. The bidders are required to quote their price in Price bid format given in **Appendix H** to this RFP.

59. Commercial offers will be opened only of the Bidder whose equipment is short-listed, after technical trials and staff evaluation. The Commercial Offer must be firm and fixed and should be valid for at least 18 months from the last date of bid submission.

#### **Commercial Bid Opening**

50. The Commercial Offers will be opened by the Contract Negotiation Committee (CNC) and if Bidder desires he may depute his representative, duly authorised in writing, to be present at the time of opening of the offers.

51. The date, time and venue fixed for this purpose will be intimated separately after the evaluations are completed.

52. The CNC will determine the lowest bidder (L1).

#### **Additional Aspects**

53. **Standard Conditions of RFP.** The Government of India desires that all actions regarding procurement of any equipment are totally transparent and carried out as per established procedures. The bidder is required to accept our standard conditions furnished at **Appendix J** to this RFP regarding Agents, penalty for use of undue influence and Integrity Pact, access to books of accounts, arbitration and clauses related to Law. These conditions along with other clauses of the Contract form the Standard Contract Document (as at **Chapter VI** of DAP 2020) indicates the general conditions of contract that would be the guideline for all acquisitions. The draft contract would be prepared as per these guidelines.

#### **PART IV: BID EVALUATION AND ACCEPTANCE CRITERIA**

54. A list of documents/details to be submitted along with the bids is placed at **Appendix M** as a reference to help in completeness of bid and meeting the procurement process schedule.

55. The bids shall be unconditional and unqualified. Any condition or qualification or any other stipulation contained in the bid shall render the bid liable to rejection as a non-responsive bid.

56. The bid and all communications in relation to or concerning the bidding documents shall be in English language.

57. **Evaluation and Acceptance Process.**

(a) **Evaluation of Technical Proposals.** The technical proposals forwarded by the Bidders will be evaluated by a Technical Evaluation Committee (TEC). The TEC will examine the extent of variations/differences, if any, in the technical characteristics of the equipment offered by various Bidders with reference to the QRs and prepare a "Compliance Statement" for shortlisting the Bidders. The shortlisted Bidders shall be asked to send the desired units of the equipment/weapon system to India for Field Evaluation in varying climatic, altitude and terrain conditions. Field Evaluation would be conducted for parameters at **Appendix A** 'Operational Characteristics & Features'. A Staff Evaluation will be carried out, which will give out the compliance of the demonstrated performance of the equipment vis-à-vis the requirements. The compliance would be determined only on the basis of the parameters specified in the RFP. The Staff Evaluation will analyse the field evaluation results and shortlist the equipment recommended for introduction into service.

(b) **Evaluation of Commercial Bid.** The Commercial bids of only those bidders will be opened, whose technical bids have been cleared by TEC and equipment has been shortlisted after Field Evaluation (Trials)/Technical Trials and Staff Evaluation. Comparison of bids would be done on the basis of Evaluation criteria given in **Appendix H** to this RFP. The L-1 bidder would be determined by Contract Negotiation Committee (CNC) on the basis of **Appendix H** to this RFP. Only L-1 bidder would be invited for negotiations by CNC.

(c) **Contract Conclusion.** The successful conclusion of CNC will be followed by contract conclusion.

**Appendix A**

(Refers to Para 27, 28, 29, 31(a), 32, 39 & 57(a) of RFP)

**OPERATIONAL CHARACTERISTICS AND FEATURES**

1. **Proposed Service Employment.** The proposed AD gun is planned to replace the 'in service' Guns, currently held by Army AD. The AD gun will be employed for providing terminal / close in AD to critical assets in all types of terrain to include HAA/ mountainous terrain /plains/ deserts / semi-deserts.

**Operational Parameters**

2. **Mobility.** The mobility of the gun system should permit the following:-
  - (a) Movement in all types of terrain to include mountainous terrain/HAA, plains, deserts/semi-deserts, in towed configuration.
  - (b) Gun should be towed on metalled roads minimum upto 50 kmph and in off road conditions minimum upto 10 kmph.
  - (c) Capable of being transported by 'in service' aircraft and ships.
3. **Transportability.** Rail transportability on broad gauge with ODC, if applicable.
4. **Operating Altitude of the Gun System.** Upto 4.5 Km above Mean Sea Level.
5. **Weight of the Gun.** Not more than 7 Tons+ 10% in travelling position (excluding auxiliary power unit i.e. generators).
6. **Into Action and Out of Action.** Into action or out of action time both during day and night with a trained crew should not exceed 10 minutes.
7. **Crew.** Should not exceed four AD soldiers (excluding driver).

**Technical Parameters**

8. The Technical Parameters are:-
  - (a) The gun should be capable of being towed by an 'in Service' gun towing vehicle for employment in all types of terrain to include mountainous terrain / HAA / plains / semi-deserts / deserts.
  - (b) The gun should be able to engage air targets during day and night using 'in service' fire control radar (at the time of evaluation) as well as Electro Optical Fire

Control Systems (EOFCS) independently. Provision for handing over target from radar to EOFCS must exist.

(c) The gun should be able to fire smart / advance ammunition {similar to Pre-Fragmented Programmable Proximity Fuze (3P) / Advanced Hit Efficiency and Destruction (AHEAD) class of ammunition) in addition to standard ammunition.

9. **Salient Features of the Gun.** The salient features of the AD gun should be as follows:-

- (a) **Rate of Fire.** Cyclic rate of fire of 200 rounds/minute or more.
- (b) **Effective Range against Air Targets.** Upto 4000m or more.
- (c) **Effective Height against Air Targets.** Upto 2500m or more.

10. Gun should be capable of engaging aerial targets:-

- (a) Moving with speed upto 500 m/s and above (Vendor certification for targets above speeds of 'in-service' target system at the time of evaluation).
- (b) The gun should have the capability to engage fighter aircraft, transport aircraft, helicopters (including hovering helicopters), all types of Remotely Piloted Aircraft (RPA) / Drones, Cruise missiles, PGMs, Micro light aircraft, Para motors, Para gliders and Aero models(Vendor Certification).

11. Gun should be capable of engaging ground targets upto 2000m or more.

12. **Electro Mechanical Drives.** The gun should have Electro Mechanical / electric drive.

13. The gun should have auto parallax correction and auto leveling features with manual system as back up.

14. The gun should be compatible with GPS and should be capable of integrating with IRNSS (Indian Regional Navigation Satellite System) in future.

15. **Ammunition System.**

- (a) AD gun must have automatic ammunition loading facilities.
- (b) It should be able to carry out an effective engagement (seven rounds or more for minimum two seconds) without reloading the gun during the said engagement.
- (c) The gun should be capable of firing the following types of ammunition:-
  - (i) Programmable ammunition with self-destruct capability (Pre-Fragmented Programmable Proximity Fuze/ AHEAD or similar ammunition, Air Burst Ammunition or PFFC will not be considered as programmable ammunition).
  - (ii) High Explosive (HE) rounds with self-destruction capability and tracers.
- (d) There should be adequate ammunition stowage (quantity of ammunition on the gun) for more than five effective engagements.

(e) Reloading of gun with rounds required for minimum five effective engagements should be completed within 10 minutes and should be possible with two or less personnel.

(f) Ammunition should have shelf life of at least 10 years, which may be extendable after inspection by competent authority.

16. **Angular Travel.**

(a) Elevation - Minus  $5^{\circ}$  to Plus  $80^{\circ}$ .

(b) Azimuth -  $0^{\circ}$  to  $360^{\circ}$ .

17. There should be a provision of putting fire limiting system (Taboo), within the above stated bearing and elevation.

18. **Capability.**

(a) The gun should be able to engage aerial targets independently with the 'in service' fire control radar and EOFCS by day & night.

(b) The gun should have the capability to engage fighter aircraft, transport aircraft, helicopters (including hovering helicopters), Remotely Piloted Aircraft (RPA) / Drones, Cruise missiles, PGMs, Micro light aircraft, Para motors, Para gliders and Aero models.

(c) Should be capable of minimum five or more effective engagements of continuous fire without barrel change.

19. **Hit Probability.** Hit probability of minimum 0.6 during one effective engagement cycle at 70% of the maximum effective range with EOFCS using smart ammunition.

20. **EOFCS.**

(a) The gun should be capable of engaging air targets using the EOFCS when it is operating without fire control radar during day & night.

(b) EOFCS should comprise of an integrated computing and sighting system having a CCD camera, TI Sight (cooled), LRF and auto tracker or similar equipment based on vendor configuration.

(c) EOFCS should have adequate tracking range so as to enable the engagement of target at the maximum effective range of the Gun (target speed upto 500 m/s, Vendor Certification for targets above speeds of in-service target system).

(d) LRF should be eye safe (Vendor Certification).

21. **Power Supply System.** Durable, rechargeable, maintenance free battery bank. The battery capacity should permit minimum 10 hours normal operation or 20 effective engagements. Following should be provided additionally:-

- (a) A low noise / silent auxiliary power unit (generator) for charging of the battery pack (Central Pollution Control Board norms to be complied with).
  - (b) Ability to operate from commercial mains / generator of 220V 50Hz AC supply.
  - (c) Capability to recharge batteries while system is in operation.
  - (d) Adequate digital indicator.
22. **Service Life.** Service life of the gun should not be less than 25 years (Vendor certification).
23. **EMI / EMC.** The system should be EMI / EMC hardened as per MIL STD 464C at system level and as per MIL STD 461E or better at sub system level.
24. **Environmental Standards.**
- (a) **Environmental Tests.** As per relevant portion of JSS 55555.
  - (b) **Operating Temperature of Gun System.**
    - (i) **Minimum.** Between minus 20 deg to minus 10 deg (Vendor certification for temperature beyond minus 20 upto minus 25).
    - (ii) **Maximum.** Between plus 45 deg to plus 55 deg.

### **Maintenance & Ergonomic Parameters**

25. **Cover during Transportation and Field Condition.** Cover for Ordnance & sight to withstand carriage and handling in field conditions.
26. **Maintainability Requirements.** The system should be easy to maintain and repair with Built in Test Equipment (BITE). Also, protection should be provided to prevent reverse polarity fitment for all PCBs / Cards / Cables / Batteries. Further, software in equipment, if applicable, should be restorable in field conditions.
27. **Packing Specification/ Instructions.** The tools and spares should be contained in containers to prevent damage during carriage and handling in field conditions.



**Appendix B**

(Refers to Para 27, 31(b) and 32 of RFP)

**COMPLIANCE TABLE**For **QUANTITY 220 AIR DEFENCE GUNS AND AMMUNITION**

Ser No	Requirement as per the RFP	Compliance/ Partial Compliance	Indicate references of Paras/Sub Paras of the Main Technical
<b>General Conditions of RFP (Para 01 to 26)</b>			
<b>Technical Parameters as per Appendix A</b>			
	Essential Parameters 'A'		
<b>Commercial Parameters as per RFP</b>			
	Performance-cum-Warranty Bank Guarantee as per Para <u>2</u> of Appendix G of RFP		
	Advance Payment Bank Guarantee as per Para 1.4.1 of Appendix G of RFP		
	Integrity Pact Bank Guarantee as per Para 20 of RFP (25 Crores)		

**Appendix C**  
(Refers to Para 11 of RFP)

**WARRANTY CLAUSE**

1. The **SELLER** warrants that the goods/services supplied under this contract conform to technical specifications prescribed and shall perform according to the said Technical Specifications.
2. The **SELLER** warrants for a period of 24 months from the date of acceptance deliverables post Joint Receipt Inspection that the goods/stores/services supplied under this contract and each component used in the manufacture thereof should be free from all types of defects/failures (including latent and patent defects).
3. If within the period of warranty, the goods/stores are reported by the **BUYER** to have failed to perform as per the specifications, the **SELLER** shall either replace or rectify the same free of charge, maximum within 45 days of notification of such defect by the **BUYER** provided that the goods are used and maintained by the **BUYER** as per instructions contained in the Operating Manual. Warranty of the equipment would be extended by such duration **of downtime**. Record of the down time would be maintained by user in log book. Spares **and all consumables** required for warranty repairs shall be provided free of cost by **SELLER**. The **SELLER** also warrants that the special oils and lubricants required for the warranty repair of the equipment shall be provided by the **SELLER** himself. **All activities including diagnosis, rectification, calibration, transportation etc, required for making equipment serviceable and available would be the SELLER's responsibility.** The **SELLER** also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the **BUYER** and the **SELLER**. The **SELLER** shall intimate the assignable cause of the failures.
4. **SELLER** hereby warrants that necessary service and repair backup during the warranty period, including routine maintenance beyond Unit Level (delete if CMC/AMC is not part of the contract), shall be provided by the **SELLER** and he will ensure that the **cumulative downtime period for the equipment does not exceed 10% of the warranty period. All consumables, oils, lubs and spares required for scheduled maintenance and servicing of Guns (as per maintenance philosophy of vendor) during warranty period will be provided by the bidder during the warranty period.**
5. If a particular equipment/goods fails frequently and/or, the cumulative down time exceeds 10% of the warranty period **or a common defect is noticed in more than 05% of the quantity of goods with respect to a particular item/component/sub-component, that complete item/equipment shall be replaced free of cost by the SELLER within a stipulated period of 120 days of receipt of the notification from the BUYER duly modified/upgraded through design improvement in all equipment supplied/yet to be supplied and ESP supplied/yet to be supplied.**
6. **SELLER shall associate technical personnel of maintenance agency and QA of**

**BUYER during warranty repair and shall provide complete details of defect, reasons and remedial actions for averting recurrence of such defects.**

7. In case the complete delivery of the Engineering Support Package is delayed beyond the period stipulated in this contract, then the **SELLER** undertakes that the warranty period for the goods/stores shall be extended to that extent.

8. The **SELLER** warrants that the goods supplied will conform to the Temperature and Humidity conditions as mentioned at Appendix A to RFP.

**Appendix D**  
(Refers to Para 33 of RFP)

**CERTIFICATE: MALICIOUS CODE**  
(To be rendered on the Company Letter head)

1. This is to certify that the Hardware and the Software being offered, as part of the Contract, does not contain embedded malicious code that would activate procedures to:-

- (a) Inhibit the desired and designed function of the equipment.
- (b) Cause physical damage to the user or equipment during the exploitation.
- (c) Tap information resident or transient in the equipment/ networks.

2. The firm will be considered to be in breach of the procurement contract, in case physical damage, loss of information or infringements related to copyright and Intellectual Property Rights (IPRs) are caused due to activation of any such malicious code in embedded software.

(Signed)

Designation/Name/Address of firm

Date:

Place:

**Appendix E**  
(Refers to Para 35 & 36 of RFP)

**REPAIR AND MAINTENANCE PHILOSOPHY**  
**(ENGINEERING SUPPORT PLAN (ESP))**

1. **Maintenance Philosophy.** Maintenance of the equipment is structured on two different levels. The Maintenance philosophy can be categorised into 'O' & 'D' levels depending upon the technological complexity of the equipment as under:-

(a) **'O' Level.** Includes Unit, Field Repairs and Intermediate Repairs (1<sup>st</sup> & 2<sup>nd</sup> and 3<sup>rd</sup> Level). In total, there will be 11 Field Repair points to provide following types of repair cover to Air Defence Guns:-

(i) **Unit Repairs.** Repairs, carried out within the unit holding the equipment using tools supplied by the manufacturer as per scaling. These repairs generally pertain to cleaning, lubrications, minor repairs and replacement of components and minor assemblies including Line Replaceable Units (LRUs) etc, carried out without any sophisticated tools or test equipment. The manufacturer is required to provide the following as per provisions in the RFP for carrying out such repairs :-

(aa) Table of Tools and Equipment (TOTE) with each equipment including operators manual.

(ab) Scaling of Special Maintenance Tools (SMT), Special Test Equipment (STE) and Special Equipment (SE) as required.

(ii) **Field Repairs.** Repairs carried out at field/floatilla/station level or equivalent service organisation by technicians specially trained for the purpose, requiring special tools and spares provided additionally for the class of the equipment. These repairs comprise replacement of common Line Replaceable Units (LRUs), sub-modules, other components beyond the holding of units and repairs undertaken beyond a unit level. Normally, a field/station workshop covers such repairs of a group of units holding the said class of equipment and their number will be stated based on equipment deployment pattern. The manufacturer in addition to the basic unit level SMTs/STEs/SE, is required to provide the following:-

(aa) Quantity and specification of spares up to sub-Module level, other replaceable components that need to be stocked for a specified population and class of the equipment. Annexure I to this Appendix.

(ab) Additional Special Maintenance Tools and Test Equipment needed for each such field/floatilla/station work shop. Annexure II to this Appendix.

(ac) Technical Literature as per Annexure III to this Appendix.

(iii) **Intermediate Level.** Includes 3rd level Intermediate Repairs by Corps Zone workshop/Dockyard/Base Repair Depot or other similar service organisation. These are extensive or special repairs carried out to include component level repairs. This level of repair envisages special diagnosis and repairs of the repairable inventory up to Printed Circuit Board (PCB) level, major assemblies, interface equipment/software and other components beyond the scope of field/flotilla/station level repairs. These repairs are carried out in the designated workshops by technicians specially trained for this purpose requiring special tools and spares and the number of such facilities will be stated based on equipment deployment pattern. The manufacturer is required, among others, to provide the following:-

(aa) Quantity and specification of spares up to PCB level that need to be stocked for a population of the equipment. Details of Spares to be provided as per Annexure I to this Appendix.

(ab) Special Maintenance Tools and Test Equipment that has to be provided to each of these workshops. Details of SMTs & STEs to be provided as per Annexure II to this Appendix.

(ac) Oils and lubricants necessary for Servicing.

(ad) All necessary technical literature Annexure III to this Appendix.

(ae) Calibration facilities for test equipment, where applicable.

(b) **'D' Level (Base Level Repairs).** These repairs include 4th level extensive Base Overhauls (BOH)/ Depot level Repairs which are either routine and planned or necessitated due to major repairs/renewal requirements requiring stripping and rebuilding of equipment. Extensive repairs of components / sub-assemblies and overhaul of the complete equipment is carried out by this facility and due to the complexity requires specific technical knowledge, infrastructure, related documentation, experience and proper quality control. Post such repairs, detailed trials are conducted usually by the overhauling agency, prior to handing over of the equipment to the unit for operational exploitation. Depending on the population of the equipment, such facilities may be established in the country. In total there shall be 01 Base Repair point to provide Base repair cover to quantity 220 Air Defence guns. For this, the manufacturer is required to provide the following:-

(i) All Special Maintenance Tools, jigs, fixtures and test equipment for carrying out repairs. Details to be given as per Annexure II to this Appendix. SMT/STEs for repair of electro- optical systems to be listed separately.

- (ii) Quantity and specification of spares, sub assemblies as per population to be maintained. Details to be given as per Annexure I to this Appendix.
- (iii) Technical literature as per Annexure III to this Appendix.
- (iv) Calibration facilities for test equipment.

### **Engineering Support Package (ESP)**

2. ESP is the basic engineering support the Seller needs to provide to the Buyer for undertaking essential repairs and maintenance of the equipment during its exploitation. These repairs and maintenance would be in consonance with the Maintenance Philosophy enunciated above. ESP would constitute the following aspects:-

- (a) Spares.
- (b) SMTs/STEs test set-up.
- (c) Technical Documentation.
- (d) Training.

### **3. Spares**

(a) **Manufacturer's Recommended List of Spares (MRLS)**. This is the list of spares, recommended by the manufacturer, for maintaining operational serviceability of the equipment and sustains it for the period as stipulated in the RFP. Based on the explanation given above, you are requested to provide MRLS to sustain the equipment for a period of four years for various levels of repair as per format given at **Annexure I to this Appendix**. You will be required to provide these both with Technical and Commercial proposals. Cost of the MRLS, along with likely consumption rate of spares is to be provided with the Technical proposal. The MRLS will be supported by Reliability & Maintainability (R&M) report for the proposed spares along with their Mean Time Between Failure (MTBF). MRLS would be provided separately for each such sub system. In order to prevent manipulation of the quantum of MRLS for commercial competitiveness or overload unnecessary MRLS, 'Adequacy' clause and 'Buy Back' clause will be co-opted in the contract as under:-

- (i) **'Adequacy' Clause**. The Bidder will confirm to the Buyer the range and depth of Accompanied Accessories/ User Replaceable Parts/Expendable, Spares and SMT/STE/Test Jigs being supplied are complete and adequate for carrying out repairs on the equipment up to the specified level. Any Bidder found to be providing lesser ESP/MRLS in terms of range and depth will have to make good the deficiency at no extra cost (Para 29 of RFP refers). The Bidder will also commit that any additional items, spares, tools and equipment needed for use, maintenance and repair will be supplied by the Bidder at prices and within a period as specified in the contract, on receipt of notification from the Buyer for the Life-Cycle Support period. The Bidder will confirm that, if two

different prices have been given for the same/similar item, then the lower price quoted will prevail. In case, the quoted accessories has several items viz, Sampling Accessory Kit and add up price of these items is higher than the quoted price of the accessory, then the price would be lowered / adjusted proportionately for the items.

(ii) **'Buy Back' Clause.** The Buyer would have the option to amend the Manufacturer's Recommended List of Spares (MRLS) proposed by the Bidder within a period specified in the contract, post expiry of the warranty period. The Bidder needs to agree to either 'Buy Back' the spares rendered surplus or exchange them on 'cost-to-cost' basis with the spares, as required by the Buyer. The said spares would be purchased / replaced by the Seller, based on the prices negotiated in the contract. The 'Buy Back' clause would not be applicable for additional spares included by the Buyer in MRLS during FET and SE stage, as brought out at Para 29 of RFP.

(b) The spares are required to be categorized in four categories as follows: -

- (i) Manufactured by Bidder as OEM and can be sourced as per Part No.
- (ii) Bought out items and customized by the OEM for the specific purpose and such customization would require OEM intervention.
- (iii) Bought out from other OEMs/Third Party as specialised items and used without any customization. Such items can be sourced by quoting their Part No./Identification No. as given by OEM/Third Party and directly utilised.
- (iv) General Engineering items/COTs which can be sourced by stating the relevant standards and item description.

4. **Special Maintenance Tools / Special Test Equipment and Test Jigs (SMTs/STEs/Test Jigs).** SMTs, STE and Test Jigs are essential tools/Jigs/fixtures required to undertake effective engineering support / repairs on the equipment and its systems, based on the Maintenance Philosophy. This would be formulated in a similar manner as explained for MRLS and details are to be included in both Technical and Commercial Proposals as per suggested format at **Annexure II** to this Appendix. SMTs, STEs and Test Jigs will be provided by the Seller, as per the list prepared by the Buyer on completion of MET, where applicable. The list of equipment required to be supplied will incorporate Adequacy Clause, as elaborated above.

5. **Technical Documentation.** The Bidder will be required to provide the technical literature preferably in IETM (Interactive Electronic Training Manuals) in Level 4 format or higher. The details of technical literature to be supplied with the system should be listed as per the suggested format at **Annexure III** to this Appendix. This should be provided with both Technical and Commercial Proposals. The cost column may be left blank in the Technical Proposal. An illustrated list of documents which may be submitted by the Seller is as under:-

- (a) User Handbook/Operators Manual in English and Hindi.
- (b) **Technical Manuals.** (as per governing JSG/Guide for other technologies)
  - (i) **Part I.** Tech description, specifications, functioning of various systems.



- (ii) **Part II.** Inspection/Maintenance tasks repair procedures, materials used, fault diagnosis and use of Special Maintenance Tools (SMTs)/Special Test Equipment (STEs).
- (iii) **Part III.** Procedure for assembly/disassembly, repair up to component level, safety precautions.
- (iv) **Part IV.** Part list with drawing reference and List of SMTs/STEs Test Bench.
- (v) Rotable list, norms of consumption, mandatory/ non-mandatory spares list for each system.
- (c) Table of Tools & Equipment (TOTE) & carried spares.
- (d) Complete Equipment Schedule.
- (e) Servicing schedule.
- (f) Design Specifications.
- (g) Technical Manual on STE with drawing references.
- (h) Condemnation limits.
- (j) Packing specifications /instructions.
- (k) Permissive Repair Schedule.
- (l) Any additional information suggested by the OEM.

6. **Details of OEMs.** For major / complex equipment, a large number of other OEMs may also be involved in manufacture of various systems/sub systems / support equipment. Details of such OEMs will also be intimated by the Bidder as per table below:-

Table - Format for Submitting Details of OEMs

Ser No	Equipment	Part No	OEM	Contact Details (Tel/Fax/Email)	Details of Government License to OEMs

7. **Training.** A training package for operators, operator trainers and maintenance personnel to undertake operation and maintenance of equipment (Unit, Field, Intermediate and Base level maintenance) and QA personnel for QA of equipment as stipulated in respective contract, along with tools and test jigs training would be required to be carried out in English language. Requirements such as training aids, projection system, complete equipment with accessories, technical literature, spares, test equipment, test set up, charts, training handouts, power point presentations, Computer Based Training (CBT), Documentation, Simulators etc will be provided by the Seller for the conduct of training. Training should preferably be conducted before the induction of the equipment. The Seller will provide the Operator and Maintenance & Repair training, for the duration, strength and locations specified in the RFP and Contract. The following may also be noted:

- (a) The requirement of training and associated equipment must be clearly specified in Part I and details should be placed as per **Annexure IV** to this Appendix.
- (b) The costs for aggregates and training must only be indicated in the commercial proposal.
- (c) **Sufficiency clause.** Bidder will give an undertaking that the proposed Engineering Support Package (ESP) is sufficient to sustain the field, intermediate & base level repair maintenance for quantity 220 x AD Guns for a period of four years after expiry of warranty. Any item falling short in ESP in terms of range and depth will be replenished by the Bidder at **No Additional Cost**. Bidder will give an undertaking agreeing to carry out any change to the ESP (to include MRLS, SMT/STE, Technical Literature and Training Aggregates) under the provisions of this clause within the existing commercial quotes. On termination of training, technicians should be capable of carrying out stipulated maintenance / repair to the full system. Else training will be repeated by the vendor **without any additional cost**.

### **Life Cycle Support Contract (LCSC)**

8. A Life Cycle Support Contract (LCSC) would be signed along with the main acquisition contract for all equipment. Life-cycle support for all types of equipment through its service life would be provided by the Bidder through a LCSC, which inter-alia would include supply chain to ensure platform supportability and availability in accordance with specifications, supply of spares, special tools, repair of defective equipment / modules / LRUs, services of specialists, creation of maintenance eco-system, obsolescence management, etc.
9. The Bidder will provide life-cycle support through a Life Cycle Support Contract (LCSC) as per the agreed terms. LCSC would bind the Bidder to provide product support through Long Term contract (for 5 years) for supply of spares, repairs and Man-day rates of Specialists. The RFP shall clearly mention that the vendor would have to finalise the terms for the life time product support and the LCSC along with the current contract only. LCSC, will also include active obsolescence management, wherein even after the mandatory period, the Bidder would be bound to give at least two years notice to the Government of India prior to closing the production line to enable a Life Time Buy of all spares. Under the LCSC, Spares and Repair support would be provided by the Bidder through the following Rate contracts which would be signed with the main contract:-

- (a) **Itemised Spare Parts Price Lists (ISPPL).** ISPPL for all Spares or Line Replaceable Units (LRUs) of the equipment along with their Base price, annual escalation, delivery period and the MTBF (where applicable) be provided, at the time of submission of offer. The ISPPL shall also include details of the source, especially for items which are COTS, bought-out, proprietary, etc. ISPPL shall also indicate interoperability of spares across projects, in case spares/equipment is already inducted in the Indian Armed Forces. The Bidder would submit a comprehensive Itemised Spare Parts Price Lists (ISPPL) comprising the following: -

- (i) Complete Part Identification List (PIL) for all Spares or Line Replaceable Units (LRUs), along with corresponding unique part numbers. The list is not to be limited to MRLS (Depot spares) or On-board Spares (spares along with the system) and should comprise entire list of spares of the equipment.

- (ii) Base Price list of each of the spares along with annual escalation at time of submission of the offer.
- (iii) Delivery Period of each spare after receipt of Order.
- (iv) Mean Time Between Failure (MTBF), where applicable.
- (v) Terms and conditions for supply of spares.

**Table 2 -Illustrative Format for Submitting Itemised Spares Parts Price List (ISPPL)**

Ser No.	Part No	Description	Quantity fitted in each Equipment (to cover all items)	Unit Price List (along with annual escalation)	Delivery Period	Category: Vital / Essential / Desirable (V/E/D)	Mean Time Between Failure (if Applicable)	Recommended as MRLS (Yes/No)

Note:- The following details be included in the spare parts submission offer:-

- (vi) Sourcing of spares wrt COTS and Proprietary.
- (vii) Interoperability of spares across projects, in case the part/system/sub-system, etc. is already inducted in some other equipment currently in service with the Indian Armed Forces, or has been contracted for supply to the Indian Armed Forces.

(b) **Repairable Items Price Lists (RIPL).** RIPL would comprise of all repairable sub systems/ blocks and units. Wherever applicable, source of components required for repairs of units should also be specified. RIPL will also indicate reparability of these in India. The Bidder should submit the RIPL comprising the following:-

- (i) Complete catalogue of repairable spares (at LRU level), along with their Part numbers. Source of components required for repairs of units should also be specified, wherever applicable.
- (ii) Base Price list for repairs clearly indicating repairs that can be undertaken in India and at OEM premises. RIPL will comprise of all repairable sub systems/ blocks and units.
- (iii) Terms and conditions for undertaking repairs be specified.
- (vi) Delivery Period after receipt of order must be mentioned.
- (vii) For imported equipment, the impetus is to undertake repairs in India. Repair list in such cases should clearly segregate the list of items that can be repaired in India and those that have to be undertaken to the OEM premises.

**Table 3 - Illustrative Format for Submitting Details of Repairable Spares**

Ser No.	Part No.	Description	Repairs to be Undertaken		Unit Qty	Price (along with annual escalation)	Lists with	Delivery period
			In India	OEM premise				

Note: - The following aspects to be ensured:-

- (i) Repair costs to be all-inclusive (collection/delivery ex-Depot).
- (ii) Warranty post repairs will be as specified in the contract document.

(c) **Man-Day Rates for Services/Special Tools.** Man-day Rates for Services/Special Tools of Specialists (where applicable) should be specified corresponding to the categorisation of specialists, e.g. Designers, Engineers and Technicians, as applicable. Man-day Rates for hiring Special Tools, where applicable will also be provided.

#### **Active Technology Obsolescence Management**

10. OEM will indicate his methodology to undertake Active Obsolescence Management through life cycle of equipment which would include upgradation of systems/ subsystems/ units on completion of its fair service life. The Bidder/OEM (as applicable) shall also intimate the Buyer on likely technology obsolescence of various sub-assemblies/units/modules of equipment through an Annual Bulletin. In case of impending obsolescence of components, bulletin should specify either alternate item or option for life-time buy as under:-

- (a) The Bidder/OEM (as applicable) will notify the Buyer not less than three years before the closure of its production line about the intention to close production of equipment for provision of purchasing spare parts, before closure of the said production line.
- (b) Three years prior to completion of design/service life of equipment, the Bidder/OEM (as applicable) will submit techno-commercial proposal for upgradation of equipment, wherever applicable, to mitigate technology obsolescence and for ensuring product support for next 15 years.

**Annexure I to Appendix E**  
(Refers to Para 3(a) of Appendix E)

**MANUFACTURER'S RECOMMENDED LIST OF SPARES (MRLS)**

EQUIPMENT: **QUANTITY 220 AIR DEFENCE GUNS**

Original Equipment Manufacturer (OEM): \_\_\_\_\_

Ser No	Manufacturer's Part No	Source of Supply	Nomenclature	Nos fitted in one equipment	Vital / Essential/ Desirable (V/E/D)	Illustrated spare Part List (ISPL) Reference	Unit Cost	Recommended scale for 220 qty Eqpt for two years		Total Cost		Remarks
								'O' Level Repair	'D' Level Repair	Field Repair	Base Repair	
								11	01			
Total Cost												

**Note:**

- Maintenance spares/stores like lubricants, sealing compound, gases should be given separately giving source of supply.*
- Spares for component repairs should be included under the column of Base Repair as suggested by OEM.*
- In 'Remarks' column following information (if applicable) be given:*
  - If an item has a shelf/operational life it be marked as 'G' and life indicated.*
  - Matching set of components be indicated.*
  - Item which can be locally manufactured should be marked 'LM'.*
  - Items which cannot be manufactured in India due to sophisticated design/technology may be marked as 'SI' (Special Item).*

- (e) *If a component/assembly is common to other similar equipment offered by the OEM earlier these should be marked 'CM' and name of the equipment be indicated.*
4. *MRLS should be drawn out of the 'Part List' of the equipment, which should be separately given as part of Technical Manual Part IV.*
  5. *If the main equipment consists of other equipment then MRLS should be prepared for them under proper heads.*
  6. *MRLS be prepared as per the maintenance concept of the customer **Appendix E** to this RFP)*
  7. *Items provided along with the equipment as spares should also be included in MRLS.*
  8. *Modules/Shop Replaceable Unit (SRU)/assemblies should be listed and their components should be included under them so as to relate each item of spare to their module/SRU/assembly.*
  9. *Complete MRLS should be costed separately for 'O' and 'D' Level repairs as it is required to be included as part of 'Total Costed Engineering Support Package' (ESP). OEM may give cost details in confidence to Contract Negotiation Committee (CNC), but other details as above be provided during Maintainability Equipment Trial (MET).*
  10. *MRLS for test equipment should also be provided on the similar format.*
  11. *'V/E/D' categorization of items i.e Vital, Essential and Desirable. The criteria for deciding this status is purely based on the criticality of the items for operational functioning of the eqpt. 'Vital', 'Essential' and 'Desirable' items are defined as under:-*
    - (a) **Vital**. *Items which are operationally critical to functioning of Equipment/Vehicle, where no redundancy is available or its failure endanger the Equipment/ Operator's safety. These items will normally be Assy/Sub-Assy, modules/PCBs and few op-critical components.*
    - (b) **Essential**. *Items whose failure although results in significant deterioration of Performance or failure of equipment, but their higher level assemblies/ rotables are also included in the scales. Such items will be approx upto 80% of the total range of items in the scales.*
    - (c) **Desirable**. *These items are generally meant for ease of operation of equipment and failure of these does not result in significant reduction of performance of the equipment.*
  12. *Likely consumption rate of spares would be provided along with their Mean Time Between Failure (MTBF) at the respective column.*

**Annexure II to Appendix E**  
(Refers to Para 4 of Appendix E)

**LIST OF SMT/STEs, JIGS, FIXTURE AND INFRASTRUCTURE**

EQUIPMENT: **QUANTITY 220 AIR DEFENCE GUNS AND AMMUNITION**

Original Equipment Manufacturer (OEM): \_\_\_\_\_

Ser No	Manufacturer's Part No	Designation	Unit Cost	Nos Required			Brief Purpose	Remarks
				'O' Level Repair	'D' Level Repair	Training Establishment (EME School for Armt & Optro and MCEME for Electroanics		
				11	01	01		

**Note:**

- (i) Prepare separate sheet for each type of equipment.
- (ii) Specify in remarks column whether the Special Test Equipment (STE)/Special Maintenance Tools (SMTs) can be used as general purpose equipment on any other kind of equipment.
- (iii) If test equipment is commercially available ex India, the source of supply be specified.
- (iv) Test equipment for calibrating the STEs should be included in the list above.
- (v) Test equipment which are required to be provided by the customer should also be included in the list above.
- (vi) SMT/STEs required for repairs of electro-optical systems to be listed separately.

**Annexure III to Appendix E**  
(Refers to Para 5 of Appendix E)

**TECHNICAL LITERATURE**

EQUIPMENT: **QUANTITY 220 AIR DEFENCE GUNS AND AMMUNITION**

Original Equipment Manufacturer (OEM): \_\_\_\_\_

Ser No.	Technical Literature	Unit Cost	Number of Copies					Total Cost	Remarks
			User Dte	EME	Ord	DGQA	Total Qty		
1.	User Handbook/operators Manual (a) For Guns /Eqpt (b) For Ammunition		220 -	23 -	- 100	01 02	244 102		
2.	Design Specifications		-	02	50*	01	03+50 *		*ammunition
3.	Technical Manual. (a) <u>Part I.</u> Tech description, specifications, functioning of various Systems.  (b) <u>Part II.</u> Inspection/Maintenance tasks, Repair procedures, materials used, fault diagnosis and use of Special Maintenance Tools (SMTs)/Special Test Equipment (STEs).  (c) <u>Part III.</u> Procedure assembly/disassembly, repair up to component level, safety precautions.  (d) <u>Part IV.</u> (i) Part list with drawing reference (ii) List of SMTs/STEs with Test Bench		10 Sets	23 Sets	40* sets for amn only	01 Set	34 +40*		*ammunition
4.	Manufacturer's Recommended List of Spares (MRLS)			06	-	01 Set	07		
5.	Illustrated Spare Part list (ISPL)			21	-	01 Set	22		
6.	Technical Manual on STE with drawing reference.			03	-	01 Set	04		One Additional Per STE
7.	CDs on the above Tech literature		30 Sets	09	-	01 Set	40		
8.	ITEMs of Class IV and above				-	01 Set	01		
9.	Gauge Schedule and list of Gauges				-	01 Set	01		

**Total Cost:**



**Note:**

- (i) *If certain technical literature is being provided free of cost it should be indicated in the remarks column.*
- (ii) *Technical literature / service manual supplied by sub contractors also to be provided in original. These are the items which have been sourced for integration into main equipment.*
- (iii) *Set of CDs being provided should permit printing and duplication.*
- (iv) *The above mentioned literature to include aspects about ammunition, where applicable.*
- (v) *Apart from the literature specified, log books will be provided with each gun/ major equipment. Vendor to provide Equipment History Sheet for each barrel including spare barrels. Format of EHS be shared with DGQA for mutual agreement for inclusion / deletion of required parameters / formats.*
- (vi) *In case any additional equipment is proposed to be supplied, their technical literature is to be included.*
- (vii) *Technical Literature will be provided in accordance with JSS 0251:2015 including 03 sets of procurement drawings (hard/ soft copy in PDF format).*

**Annexure IV to Appendix E**  
(Refers to Para 7(a) of Appendix E)

**TRAINING AGGREGATES**

EQUIPMENT: QUANTITY 220 AIR DEFENCE GUNS AND AMMUNITION

OEM:

<b>Ser No</b>	<b>Description of Training Aggregate</b>	<b>Unit Cost</b>	<b>Quantity</b>					<b>Total cost</b>	<b>Remarks</b>
			<b>User</b>	<b>Ord</b>	<b>EME</b>	<b>DGQA</b>	<b>Total</b>		
1.	Sectionised Equipment		02	-	01	-	03		Ref Note (i)
	Cut models of all types of Amn		12	20	-	5	37		
2.	Shop Replaceable Units (SRU)/PCB/Modules/Assemblies as under: (a) (b) (c)		-	-	01	-	01		
3.	Computer based training package based on interactive multimedia to include (a) Full graphics, animation, text and sound (b) Symptoms-fault correlation (expert system).		12 Sets 12*	10*	04	-	16 22*		Ref Note (ii)  *Ammunition
4.	Training Aids to include (a) Charts (b) Training Brochures (c) Blow up diagram		12 Sets	10*	02	02	16 10*		*Ammunition
5.	Cost of training operators and technicians as per Para 15 of RFP					-			
6.	Drill Cartridges		2200			-	2200		
7.	Any other								

**Total Cost:**

**Note:** (i) Sectionised Guns to include following components:-

(aa) Longitudinally cut Barrel, Buffer & Breech Block.

(ab) Working models (same size) of 'Loader and Breech Mechanism', 'Ammunition Loading and Handling System' and 'Servo System'.

(ii) The CBT Package should include animated working of guns from the instant ammunition is loaded into the gun till exiting of the round from the barrel and ejection of case. Additionally, the CBT should also give the animated working of the EOFCS, Servo System and Ammunition Fuze. CBT should also have the facility to obtain printouts of detailed diagrams given in the CBT.

**Appendix F**  
(Refers to Para 39 of RFP)

**TRIAL METHODOLOGY**

**General**

1. The field evaluation trial will be conducted under the aegis of IHQ of MoD (Army) and will constitute the following: -

- (a) User Trials.
- (b) **Technical Trials.**
  - (i) Maintainability Evaluation Trials (MET).
  - (ii) Technical and Environmental Evaluation (DGQA).
  - (iii) EMI/EMC Trials.

2. The trials will be conducted in accordance with the provisions laid out in DAP-2020 and the equipment will be tested against laid down operational parameters as per Appendix A of RFP. To evaluate the functioning of the complete system, vendor would be required to provide equipment as under:-

Ser No	Equipment	Quantity	Remarks
(a)	Gun	Two	Along with associated equipment as per system configuration proposed by vendor
(b)	Ammunition	To meet the requirement of trial as per detailed Trial Methodology and as per Vendor's solution.	Exact quantity to be finalized before trials.
(c)	Target System	Suitable number of target system for validation of parameters as given at <b>Annexure</b>	System should have MDI/ DMDI/ suitable device. Exact quantity to be finalized before trials.

3. Vendor will suggest a methodology to assess the parameters as given at RFP as per the format given below: -

Ser No	Parameter	Method of evaluation/ verification	Remarks (Explanation of method of evaluation)
--------	-----------	------------------------------------	---

4. Trial methodology proposed by vendor will not be binding on the Buyer and non-submission of the same will not be considered a reason for vendor being non-compliant. Final method of evaluation will be decided by the buyer.

5. A pre trial meeting will be held with the representatives of vendor for briefing on the conduct of various trials. The briefing would be done by the Officer in Charge (OIC) of the trials and any clarifications on the conduct can be sought by the vendor during this interaction.

6. Vendor representatives will be allowed to be present during trials and will be briefed about the performance of equipment during trials against the RFP parameters by the OIC Trial. The OIC trial will also communicate these points to them in writing. Vendor will be required to forward reply on this communication to OIC trials within one week of intimation.

7. In situ repairs of minor faults that occur during the trials may be permitted. However, the equipment will not be allowed to be changed after the trial equipment has been taken over by the trial team.

### **User Trial**

8. The User will assess the performance of the equipment against the parameters listed at **Appendix A of RFP**. The User Trials will preferably be conducted in **plains/deserts and High Altitude Area (HAA)**.

### **Technical Trials (MET)**

9. The MET of the equipment will be carried out by Directorate General EME with a view to facilitate formulation of maintenance and sustenance plans for the life cycle of the equipment.

10. MET may involve stripping of the equipment and carrying out the recommended preventive maintenance schedules, corrective maintenance, tests and adjustment to establish adequacy of maintenance tools, test equipment, technical literature and spares and also study/verification of the documents submitted by the vendor. The vendor would be required to provide the detailed technical literature comprising all relevant aspects related to repair concept as per **Appendix E of RFP** for each sub system down to the component level, **eight weeks prior to conduct of trials. All documents / literature will be in English only.** The details regarding conduct of MET will be informed to the vendor during the pre trial meeting as mentioned at Para 5 above.

### **Technical and Environmental (DGQA) Tests**

11. DGQA Evaluation will be conducted under aegis of DGQA, which comprises document verifications, field evaluations carried out along with User Trials and evaluation of systems/ sub-systems at laboratories so nominated by DGQA.

12. The DGQA evaluation will be carried out on system and sub-systems of the **Air Defence Gun and Ammunition** as per **JSS 5555/ JSS 5855-11: 2019 (Rev 1)/ JSG 0102/ CQA(L) specifications.**

13. Vendor will be required to produce all laboratory test documents / certificates and various technical literature including details of circuit diagrams, user manuals, drawings etc minimum **eight weeks** prior to the conduct of the Field Evaluation Trials. In addition, the vendor is also required to provide the various tests/jigs along with Calibration Certificate during the conduct of validation tests by DGQA where applicable. **All documents / literature will be in English only.** The Technical Literature should contain the following details:-

- (a) Calibre, Rate of fire, Muzzle Velocity, Recoil Length, Recoil time & Recoil force, Length of barrel, type of rifling and No of grooves (if rifled bore), chamber pressure, maximum range and elevation and traversing limits.
- (b) Type of Recoil System, Breech Mechanism & Firing mechanism.
- (c) Strength proof criteria (P1 & P2 pressure) and strength proof reports of barrel.
- (d) Barrel changing and barrel cooling mechanism / procedure.
- (e) Technical details of HE & Smart Ammunition.

14. In case facilities to conduct tests are not available in DGQA, tests will be conducted in any NABL accredited private / Govt laboratories in India. The vendor would be required to pay for these tests. The details of the evaluation to be carried out will be explained by DGQA representatives during the interaction mentioned at Para 5 above.

#### **EMI/EMC Evaluation**

15. The aim of these tests is to evaluate the Electromagnetic Interference and Compatibility compliance of the Equipment Under Trial (EUT). The evaluation will be conducted under the aegis of ACE, Mhow.

16. The system should be compliant to Mil Std 464C at system level and Mil Std 461E or better at sub-system level.

17. Physical tests based on test plan will be conducted by ACE, Mhow in nominated laboratories. In case facilities to conduct the tests, are not available at ACE, Mhow or other Govt laboratories, tests will then be conducted at private laboratories in India for which, the vendor would be required to pay for these tests.

18. Vendor will be required to produce all laboratory test documents/ certificates and various technical literature including details of circuit diagrams, user manuals, drawings etc minimum **eight weeks** prior to the conduct of the EMI/ EMC evaluation.

19. The details of test plan based on Emission and Susceptibility eval to be conducted will be informed to the Vendor during the pre-trial meeting as mentioned at Para 5 above.

#### **Parameter Wise Trial Methodology**

20. Broad Trial Methodology is enclosed at **Annexure**. **The trial methodology is only a broad guideline and detailed instructions will be issued during Pre Trial meeting. Clarifications, if any of the vendor can be provided during Pre-Trial meeting and at various stages of trials.**

**Annexure I**  
(Refers to Para 20 of Appendix F)

**DETAILED TRIAL METHODOLOGY**

<b>Ser No</b>	<b>Parameter of Appendix A</b>	<b>Evaluating Agency</b>	<b>Trial Methodology</b>	<b>Remarks</b>
1.	<b><u>Proposed Service Employment</u></b> The proposed AD gun is planned to replace the 'in service' Guns, currently held by Army AD. The AD gun will be employed for providing terminal / close in AD to critical assets in all types of terrain to include HAA/ mountainous terrain /plains/ deserts / semi-deserts.	<b>User</b>	<b>Physical Verification in Deserts/ Plains &amp; HAA</b>	<b>Vendor Certification for terrain where physical verification is not conducted</b>
<b><u>ESSENTIAL PARAMETERS-A</u></b>				
<b><u>Operational Parameters</u></b>				
2	<b><u>Mobility.</u></b> The mobility of the gun system should permit the following:-  (a) Movement in all types of terrain to include mountainous terrain/ HAA, plains, deserts/ semi-deserts, in towed configuration.	<b>User</b>	<b>Physical Verification</b>	
	(b) Gun should be towed on metalled roads minimum upto 50 kmph and in off road conditions minimum upto 10 kmph.	<b>User</b>	<b>Physical Verification</b>	<b>Gun will be towed using In- Service Prime Mover</b>
	(c) Capable of being transported by 'in service' aircraft and ships.	<b>User</b>	<b>Vendor Certification</b>	
3	<b><u>Transportability.</u></b> Rail transportability on broad gauge with ODC, if applicable.	<b>User</b>	<b>Physical Verification / Vendor Certification</b>	
4	<b><u>Operating Altitude of the Gun System.</u></b> Upto 4.5 KM above Mean Sea Level.	<b>User</b>	<b>Physical Verification</b>	<b>Firing to be conducted based on availability of firing ranges</b>
5	<b><u>Weight of the Gun.</u></b> Not more than 7 Tons+ 10% in travelling position (excluding auxiliary power unit i.e. generators).	<b>User</b>	<b>Physical Verification</b>	
6	<b><u>Into Action and Out of Action.</u></b> Into action or out of action time	<b>User</b>	<b>Physical Verification</b>	

Ser No	Parameter of Appendix A	Evaluating Agency	Trial Methodology	Remarks
	both during day and night with a trained crew should not exceed 10 minutes.			
7.	<b>Crew.</b> Should not exceed four AD soldiers (excluding driver).	User	Physical Verification	
<b>Technical Parameters.</b>				
8	The Technical Parameters are :-			
	(a) The gun should be capable of being towed by an 'in Service' gun towing vehicle for employment in all types of terrain to include mountainous terrain / HAA / plains / semi-deserts / deserts.	User	Physical Verification	(i) Gun will be towed using In- Service Prime Mover. (ii) Vendor Certification for terrain where physical verification is not conducted
	(b) The gun should be able to engage air targets during day and night using 'in service' fire control radar (at the time of evaluation) as well as Electro Optical Fire Control Systems (EOFCS) independently. Provision for handing over target from radar to EOFCS must exist.	User	Physical Verification by Live Firing	Gun will preferably be evaluated with all the In-Service Fire Control Radars
	(c) The gun should be able to fire smart / advance ammunition {similar to Pre-Fragmented Programmable Proximity Fuze (3P) / Advanced Hit Efficiency and Destruction (AHEAD) class of ammunition) in addition to standard ammunition.	User	Physical Verification by Live Firing	
9	<b>Salient Features of the Gun.</b> The salient features of the AD gun should be as follows:-			
	(b) <b>Rate of Fire.</b> Cyclic rate of fire of 200 rounds/ minutes or more.	User	Physical Verification by Live Firing/ Vendor Certification	
	(b) <b>Effective Range against Air Targets.</b> Upto 4000m or more.	User	Physical Verification by Live Firing	

Ser No	Parameter of Appendix A	Evaluating Agency	Trial Methodology	Remarks
	(c) <b><u>Effective Height against Air Targets.</u></b> Upto 2500m or more.	User	Physical Verification by Live Firing	
10	Gun should be capable of engaging aerial targets:- (a) Moving with speed upto 500 m/s and above (Vendor certification for targets above speeds of 'in-service' target system at the time of evaluation).	User	Physical Verification by Live Firing & Vendor Certification	
	(b) The gun should have the capability to engage fighter aircraft, transport aircraft, helicopters (including hovering helicopters), all types of Remotely Piloted Aircraft (RPA) / Drones, Cruise missiles, PGMs, Micro light aircraft, Para motors, Para gliders and Aero models(Vendor Certification).	User	Physical Verification/ Vendor Certification*	* Vendor Certification for targets which are not engaged by live firing during trials
11	Gun should be capable of engaging ground targets upto 2000m or more	User	Physical Verification by Live Firing	
12	<b><u>Electro Mechanical Drives.</u></b> The gun should have Electro Mechanical / electric drive.	User	Physical Verification	
13	The gun should have auto parallax correction and auto leveling features with manual system as back up.	User	Physical Verification	
14	The gun should be compatible with GPS and should be capable of integrating with IRNSS (Indian Regional Navigation Satellite System) in future.	User	Physical Verification and Vendor Certification*	*In case IRNSS is not developed by then.
15	<b><u>Ammunition System.</u></b>			
	(a) AD gun must have automatic ammunition loading facilities.	User	Physical Verification	
	(b) It should be able to carry out an effective engagement (seven rounds or more for minimum two seconds) without reloading the gun during the said engagement.	User	Physical Verification by Live Firing	Effective engagement to achieve desired hit probability in terms of time & number of



Ser No	Parameter of Appendix A	Evaluating Agency	Trial Methodology	Remarks
				rounds to be defined by vendor as per vendors solution.
	<p>(c) The gun should be capable of firing the following types of ammunition:-</p> <p>(i) Programmable ammunition with self-destruct capability (Pre-Fragmented Programmable Proximity Fuze/AHEAD or similar ammunition, Air Burst Ammunition or PFFC will not be considered as programmable ammunition).</p> <p>(ii) High Explosive (HE) rounds with self-destruction capability and tracers.</p>	User	Physical Verification by Live Firing	
	(d) There should be adequate ammunition stowage (quantity of ammunition on the gun) for more than five effective engagements.	User	Physical Verification	To be read in conjunction with 15 (b)
	(e) Reloading of gun with rounds required for minimum five effective engagements should be completed within 10 minutes and should be possible with two or less personnel.	User	Physical Verification	To be read in conjunction with 15 (b) & 15(d)
	(f) Ammunition should have shelf life of at least 10 years, which may be extendable after inspection by competent authority.	DGQA	Physical Verification / Vendor Certification	<p>(i) Storage conditions to be defined by the vendor.</p> <p>(ii) Vendor cert to be supported by lab test results of accredited lab.</p>
16	<b><u>Angular Travel.</u></b>			
	(a) Elevation - Minus 5 <sup>0</sup> to Plus 80 <sup>0</sup> .	User	Physical Verification	

Ser No	Parameter of Appendix A	Evaluating Agency	Trial Methodology	Remarks
	(b) Azimuth - $0^0$ to $360^0$ .	User	Physical Verification	
17	There should be a provision of putting fire limiting system (Taboo), within the above stated bearing and elevation.	User	Physical Verification by Live Firing	
18	<b>Capability</b>			
	(a) The gun should be able to engage aerial targets independently with the 'in service' fire control radar and EOFCS by day & night.	User	Physical Verification by Live Firing	
	(b) The gun should have the capability to engage fighter aircraft, transport aircraft, helicopters (including hovering helicopters), Remotely Piloted Aircraft (RPA) / Drones, Cruise missiles, PGMs, Micro light aircraft, para motors, Para gliders and Aero models.	User	Physical Verification/ Vendor Certification*	* Vendor Certification for targets that cannot be engaged by live firing
	(c) Should be capable of minimum five or more effective engagements of continuous fire without barrel change.	User	Physical Verification by Live Firing/ Vendor Certification	To be read in conjunction with 15 (b)
19	<b>Hit Probability.</b> Hit probability of minimum 0.6 during one effective engagement cycle at 70% of the maximum effective range with EOFCS using smart ammunition.	User	Physical Verification by Live Firing	(i) Same number of rounds will be given to all vendors per engagement to prove compliance. (ii) Number of rounds per engagement to be finalised prior to the trials.
20	<b>EOFCS.</b>			
	(a) The gun should be capable of engaging air targets using the EOFCS when it is operating without fire control radar during day & night.	User	Physical Verification by Live Firing	

Ser No	Parameter of Appendix A	Evaluating Agency	Trial Methodology	Remarks
	(b) EOFCS should comprise of an integrated computing and sighting system having a CCD camera, TI Sight (cooled), LRF and auto tracker or similar equipment based on vendor configuration.	User	Physical Verification	
	(c) EOFCS should have adequate tracking range so as to enable the engagement of target at the maximum effective range of the Gun (target speed upto 500 m/s, Vendor Certification for targets above speeds of in-service target system.	User	Physical Verification & Vendor Certification for speeds above those available during trials	
	(d) LRF should be eye safe (Vendor Certification).	DGQA	Vendor Certification	
21	<b>Power Supply System.</b> Durable, rechargeable, maintenance free battery bank. The battery capacity should permit minimum 10 hours normal operation or 20 effective engagements. Following should be provided additionally:-	User	Physical Verification / Certification	
	(a) A low noise / silent auxiliary power unit (generator) for charging of the battery pack (Central Pollution Control Board norms to be complied with).	User	Physical Verification / Certification	
	(b) Ability to operate from commercial mains / generator of 220V 50Hz AC supply.	User	Physical Verification	
	(c) Capability to recharge batteries while system is in operation.	User	Physical Verification	
	(d) Adequate digital indicator.	User	Physical Verification	
22	<b>Service Life.</b> Service life of the gun should not be less than 25 years (Vendor certification).	User	Vendor Certification	
23	<b>EMI / EMC.</b> The system should be EMI/ EMC hardened as per MIL STD 464C at system level and as per MIL STD 461E or better at sub system level.	ACE	Lab Tests / Certification	

Ser No	Parameter of Appendix A	Evaluating Agency	Trial Methodology	Remarks
24	<b><u>Environmental Standards.</u></b>			
	(a) <b><u>Environmental Tests.</u></b> As per relevant portion of JSS 55555.	DGQA	Physical Verification / Certification	
	(b) <b><u>Operating Temperature of Gun System.</u></b> (i) <b><u>Minimum.</u></b> Between minus 20 deg to minus 10 deg (Vendor certification for temperature beyond minus 20 upto minus 25). (ii) <b><u>Maximum.</u></b> Between plus 45 deg to plus 55 deg.	User	Physical Verification / Vendor Certification for temperatures beyond those obtained during trials	
<b>Maintenance &amp; Ergonomic Parameters</b>				
25	<b><u>Cover during Transportation and Field Conditions.</u></b> Cover for Ordnance & sight to withstand carriage and handling in field conditions.	User	Physical Verification	
26	<b><u>Maintainability Requirements.</u></b> The system should be easy to maintain and repair with Built in Test Equipment (BITE). Also, protection should be provided to prevent reverse polarity fitment for all PCBs / Cards/ Cables / Batteries. Further, software in equipment, if applicable, should be restorable in field conditions.	MET	Physical Verification / Certification	
27	<b><u>Packing Specification/ Instructions.</u></b> The tools and spares should be contained in containers to prevent damage during carriage and handling in field conditions.	User/ MET	Physical verification	

**Appendix G**  
(Refers to Para 48 of RFP)

**COMMERCIAL CLAUSES**

**1. Payment Terms**

1.1 **INCOTERMS for Delivery.** The delivery of goods will be based on DDP INCOTERMS-2020 with ultimate consignee as given below:-

1.1.1 For Guns and equipment including ESP - COD Jabalpur.

1.1.2 For Ammunition - CAD Pulgaon.

1.2. **Currency of Payment.**

Indian bidders should submit their bids in Indian Rupees.

1.3 **Contract Price and Requirement of Bank Guarantees.**

1.3.1 **Total Contract Price.** The Total Contract Price will be the final price negotiated by CNC including taxes and duties applicable at the time of signing of Contract.

1.3.2 **Base Contract Price.** The Base Contract Price will be considered as Total Contract Price excluding taxes and duties applicable at the time of signing of Contract and excluding the Total Price of AMC/CMC/PBL/LCSC (if any).

1.3.3 **Bank Guarantee(s).** For the purpose of payment of Advances to the Bidder and submission of various Bank Guarantees by the Bidder i.e for Advance Payment Bank Guarantee (APBG) Base Contract price will be considered. For Performance cum Warranty Bank Guarantee (PWBG), Total Contract Price including taxes and duties is to be considered.

1.3.4 All Bank Guarantee(s) requirements viz Advance Payment Bank Guarantee (APBG), Performance-cum-Warranty Bank Guarantee (PWBG), etc are to be submitted as per following:-

1.3.4.1 **Indian Bidder.** In case of Indian Bidders, the Bank Guarantee(s) shall be from any Indian Public or Private Scheduled Commercial Bank.

1.4 **Payment to Indian Bidders.** The schedule for payments will be based on the Buyers requirements, enumerated at succeeding Paragraphs. The summary of delivery schedule, payments to be made and schedule of submission/release of Advance Bank guarantee (s), as applicable, is specified at Annexure V to this Appendix.

**1.4.1 Advance Payment.** Fifteen (15) % of the Base Contract Price shall be paid within thirty (30) days of submission of claim and a Bank Guarantee for the equivalent amount, subject to correction and acceptability of the documents submitted. The prescribed format of the Advance Payment Bank Guarantee (APBG) is placed at **Annexure II to this Appendix**. The Advance Payment Bank Guarantee (APBG) will be deemed to be proportionately and automatically reduced until full extinction along with and prorate to value of each delivery, as evidenced by corresponding copy of document proving delivery and invoices of goods/services supplied/provided. The date of delivery would be reckoned from the date of release of Advance payment by the Buyer to the Seller ( $T_0$ ), provided the Seller submits the documents mandated by the DAP for release of advance by the Buyer within 45 days of signing of contract. In the event of the Seller not submitting the said documents within 45 days of signing of contract, the period between the 45<sup>th</sup> day and actual submission of documents will be excluded from the actual date of advance payment to arrive at the delivery date. In case, no advance is to be paid, the date for reckoning date of delivery would be the date of signing of contract.

**1.4.2 On Dispatch.** 45% of the contract price of deliverables and reimbursement of 100% taxes shall be paid on proof of dispatch of deliverables to the consignee and on production of an inspection note issued by the buyer designated inspection agency. Number and date of the Railway/Road/Air Transport receipt under which the deliverables charged for in the bill are dispatched by rail/road/Air and the number and date of letter with which such receipt is forwarded to the consignee, should be quoted on the bill. The payment will be made by PCDA/CDA through cheque/Electronic Fund Transfer (EFT) on submission of following documents: - *(Note-The list given below is illustrative. The documents that may be required, depending upon the peculiarities of the procurement being undertaken, may be included/ excluded in RFP).*

1.4.2.1 Ink-signed copy of Seller's bill.

1.4.2.2 Ink-signed copy of Commercial invoice.

1.4.2.3 The relevant Transport Receipt.

1.4.2.4 Inspection Acceptance Certificate of Buyer's QA agency demonstrating compliance with the technical specifications of the contract.

1.4.2.5 Packing List.

1.4.2.6 Certificate of Origin.

1.4.2.7 Claim for statutory and other levies to be supported with requisite documents/GST invoice (with QR code, when made applicable)/proof of payment, as applicable.

1.4.2.8 Exemption certificate for taxes/duties, if applicable.

1.4.2.9 Warranty certificate from the SELLER.

**1.4.3** In case of failure of the Seller to deliver the deliverables to the Buyer or inordinate delay in the said delivery leading to Termination of the Contract in

accordance with Article 22A.1 of SCD, the SELLER will be liable to return payments received against dispatch.

1.4.4 **On Delivery.** 35% of the contract price of deliverables shall be paid on completion of JRI post delivery and issue of JRI Certificate/Certified Receipt Voucher (CRV) issued by the Buyer.

1.4.5 **Part-Dispatch/Part-Shipment.** Part-dispatch or part-shipment of goods is permitted and corresponding payment will be released to the Seller. However, where permitted, the minimum quantity for using this facility on each occasion will not be less than 12 guns. Complete ammunition for each delivery period will be delivered in one consignment. .

1.4.6 **Payment for Training.** Payment for training of Operators and Maintenance personnel will be done after completion of training as given in **Para 16** of RFP. Vendor will also furnish training completion certificate from buyer, prior to payment for training.

1.4.7 **Payment of Taxes and Duties.** Payment of taxes, duties and statutory levies will be made on submission of requisite documentary proof to Paying authority. Reimbursement of taxes and duties will be as per rates and amounts indicated in the commercial bid/contract or as per actuals whichever is lower.

1.4.8 **Exchange Rate Variation.** Exchange Rate variation shall be applicable for Rupee contracts with Indian Vendors, based on RFPs issued under all categories of capital acquisitions mentioned at Para 6 to 11 of Chapter I of DAP. The indigenous & import components as also the various currencies (of the import components) for ERV purposes, must be determined in advance. The guidelines on protection of Exchange Rate Variation are given at **Annexure I to this Appendix.**

1.4.9 **Verification of Indigenous Content and Absorption of Critical Technologies.** The IC Content and absorption of critical technologies achieved by vendor for complete contract will be verified by the Board of Officers after completion of all deliveries. Balance 5% of Base Contract Price will be released after verification and approval of the Board Proceedings.

2. **Performance-cum-Warranty Bank Guarantee Clause.** A Performance-cum-Warranty Bank Guarantee (PWBG) of 3% of value of the Total Contract Price including taxes and duties would be furnished by the Bidder in the form of a Bank Guarantee to sequentially act as Performance Bank guarantee till the delivery and as Warranty Bank Guarantee on delivery. The PWBG shall be submitted by the Bidder within one month of signing of contract and shall be valid for a period, until three months beyond the warranty period, as specified in the RFP. If at any stage, the Performance Guarantee is invoked by the Buyer either in full or in part, the Bidder shall make good the shortfall in PWBG within 30 days by an additional Bank Guarantee for equivalent amount. In the event of failure to submit the required Bank Guarantee against invoked Performance Guarantee, equivalent amount will be withheld from the next stage payment till the shortfall in the Bank Guarantee is made good by the Bidder. The prescribed format of the Performance-cum-Warranty Bank Guarantee is placed at **Annexure III to this Appendix.**

3. **Inspection.** Pre Dispatch Inspection (PDI) would be at the discretion of the Buyer. In addition Joint Receipt Inspection (JRI) may also be carried out. If it is PDI, the Bidder should intimate at least 45 days prior to the day when the equipment is to be offered for PDI to enable Buyer's QA personnel to be available for inspection. All the expenses towards PDI will be borne by the Bidder except transportation and accommodation of Buyer's PDI team, which will be deputed at Buyer's expense. In case of rejection of Goods during PDI, re-PDI will be undertaken at Bidder's premises at Buyer's sole discretion. All expenses including transportation and accommodation of Buyer's PDI team will be borne by the Bidder. Towards this, the expenses towards transportation and accommodation of Buyer's PDI team will be initially done by the Buyer and subsequently reimbursed by the Bidder either by remittance or by recovery from the Balance Payment/PWBG. In the event of a failed PDI, the Bidder shall consult the Buyer for rescheduling re-PDI. In case of JRI, the representative of the Seller may be present for inspection after the equipment reaches the concerned destination. The Seller would be informed of the date for JRI.

4. **Liquidated Damages (LD).** In the event of the Bidder's failure to submit the Documents, supply the stores/ goods, perform services, conduct trials, installation of equipment, training and MET as per schedule specified in this contract, the BUYER may, at his discretion withhold cost of the specific lot/batch or 1% of the Project cost, whichever is higher, until the completion of the contract. The BUYER may also deduct from the SELLER as agreed, liquidated damages to the sum of **1/100** of the **delay percentage** {Delay percentage = (Period of Delay in Delivery in Weeks) x 100 / (Delivery Period in weeks as per contract)} of the Base Contract Price of the delayed/ undelivered stores/ services mentioned above for every week of delay or part of a week, subject to the maximum value of the Liquidated Damages being not higher than **10%** of the contract price of the value of delayed stores/ services (Any extension given by the Buyer for delay attributable to Buyer or Force Majeure Clause to be factored in delivery period).

5. **Denial Clause.** In case the delay in delivery is attributable to the Seller or a non-force majeure event, the Buyer may protect himself against extra expenditure during the extended period by stipulating a denial clause (over and above levy of LD) in the letter informing the Seller of extension of the delivery period. In the denial clause, any increase in statutory duties and/or upward rise in prices due to the Price Variation Clause (PVC) and/or any adverse fluctuation in foreign exchange are to be borne by the Seller during the extended delivery period, while the Buyer reserves his right to get any benefit of downward revisions in statutory duties, PVC and foreign exchange rate. Thus, PVC, other variations and foreign exchange clauses operate only during the original delivery period. The format for extension of delivery period/performance notice under the Denial clause is at **Annexure IV to this Appendix.**



**Annexure I to Appendix G**  
(Refers to Para 1.4.9 of Appendix G)

**GUIDELINES OF PROTECTION OF EXCHANGE RATE VARIATION IN CONTRACTS**

1. Parameters to be kept in view while formulation ERV Clause.

(a) In contracts with Indian Vendors in all categories of capital acquisitions where there is an import content, ERV clause will be provided. However, ERV clause shall not be applicable to contracts in following conditions:-

(i) The delivery period is less than one year; or

(ii) The rate of exchange variation is within the band of +/- 2.5%.

(b) ERV clause will be framed according to the specific requirements of the contract. While calling for information at the RFP stage/formulation of ERV clauses in the contracts, the following factors are to be taken into consideration depending upon the requirements of the individual contracts:-

(i) Year wise and major currency wise import break up is to be indicated.

(ii) Detailed time schedule for procurement of imported material/Services and their value at the FE rates adopted for the contract is to be furnished by the vendor as per the format given below:-

YEAR	TOTAL COST OF IMPORTED MATERIAL/ SERVICES (In rupees)	FE CONTENT-OUT FLOW (equivalent in rupees ₹ in crore)			
		DOLLAR DENOMINATED	EURO DENOMINATE D	POUNDS DENOMINATED	OTHER CURRENCIES DENOMINATE D (as applicable)

(iii) ERV clause will not be applicable in case delivery periods for imported content are subsequently to be refixed/extended unless the reasons for delivery period extension are attributable to the buyer.

(iv) For purposes of ensuring uniformity, the Base Exchange Rate on the ERV reckoning date will be adopted for each of the major foreign currencies. The Base Exchange Rate will be the BC Selling Rate of the Parliament Street Branch of State Bank of India, New Delhi. The ERV reckoning date will be the last date of submission of commercial bids as per RFP. In cases where Option Clause is exercised, the date of reckoning of ERV will be the last date of submission of bids for the RFP of the Original Procurement Case.

(v) ERV clause in the contract is to clearly indicate that ERV is payable/ refundable depending upon exchange rate as prevalent on the date of transaction with reference to Base Exchange Rate on the ERV reckoning date.

(vi) Other issues which are peculiar to the contract.

## 2. **Methodology For Claiming ERV**

“The prices finalised in the contract are based on the base exchange rates indicated in the contract. The year-wise amount of foreign exchange component of the imported items as indicated in the contract shall be adjusted for the impact of exchange Rate Variation of the Rupee based on the exchange rate prevailing on the date of each transaction, as notified by the SBI, Parliament Street Branch, New Delhi. The impact of notified Exchange Rate Variation shall be computed on an yearly basis for the outflow as tabulated in Annexure..... (The table at Para 1(b) (ii) is to be an Annexure to the contract) and shall be paid/refunded before the end of the financial year based on the certification of Finance Head of the concerned Division.....”.

3. Paying authority is to undertake a pre-audit of the documents before payment.

4. Documentation for Claiming ERV. The following documents would need to be submitted in support of the claim on account of ERV:-

- (a) A bill of ERV claim enclosing worksheet.
- (b) Banker's Certificate/debit advice detailing Foreign Exchange paid and Exchange rate as on date of transaction.
- (c) Copies of import orders placed on the suppliers.
- (d) Invoice of supplier for the relevant import orders.

**Annexure II to Appendix G**  
(Refers to Para 1.4.1 of Appendix G)

**BANK GUARANTEE FORMAT FOR ADVANCE**

To

The \_\_\_\_\_  
Ministry of \_\_\_\_\_  
Government of India  
\_\_\_\_\_ (complete postal address of the beneficiary)

1. "Whereas President of India represented by the \_\_\_\_\_ Ministry of \_\_\_\_\_ Government of India (hereinafter referred to as BUYER) have entered into a Contract \_\_\_\_\_ (No. of Contract), dated \_\_\_\_\_ (Date of Contract) with M/s \_\_\_\_\_ (Name of SELLER) (referred to as SELLER) and whereas according to the said Contract the BUYER has undertaken to make an advance payment of Rs/ US \$/Euro/PS £/Yen/AUD/SGD \_\_\_\_\_ being \_\_\_\_\_ payment of \_\_\_\_\_ % of the total value of Rs/ US \$/Euro/PS £/Yen/AUD/SGD \_\_\_\_\_ of the said Contract, against issuance of an advance guarantee by a bank."

2. We \_\_\_\_\_ (indicate the name of the bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the BUYER intimating that the SELLER is in breach of the Contractual obligations stipulated in the said Contract. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our total liability under this guarantee shall be restricted to an amount not exceeding Rs/ US \$/Euro/PS £/Yen/AUD/SGD \_\_\_\_\_.

3. We undertake to pay to the BUYER any money so demanded notwithstanding any dispute or disputes raised by the SELLER in any suit or proceedings pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the SELLER shall have no claim against us for making such payment.

4. We, further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the BUYER under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged or till \_\_\_\_\_ office / Department / Ministry of \_\_\_\_\_ certifies that the terms and conditions of the said Contract have been fully and properly carried out by the said SELLER and accordingly discharges this guarantee.

5. We, further agree with the BUYER that the BUYER shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said SELLER from time to time or to postpone for any time or from time to time any of the powers exercisable by the BUYER against the said SELLER and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, Amendment issued vide MoD ID No. 4(50)/D(Acq)/08 dated 20.06.2016 or extension being granted to the said SELLER or for any forbearance, act or omission on the part of the BUYER or indulgence by the BUYER to the said SELLER or by any such matter or thing whatsoever which under law relating to sureties would, but for this provision, have effect of so relieving us.

6. The amount of this guarantee will be progressively reduced by (percentage of advance) \_\_\_\_\_ of total value of each part shipment/services against the stage payment released by the BUYER for that shipment/services made by the SELLER and presentation to us of the payment documents.

7. This guarantee will not be discharged due to the change in the constitution of the bank or the BUYER/SELLER.

8. We, undertake not to revoke this guarantee during the currency except with the previous consent of the BUYER in writing.

9. Notwithstanding anything contained herein above:-

(a) Our liability under this Guarantee shall not exceed Rs/ US \$/Euro/PS £/Yen/AUD/SGD \_\_\_\_\_ (in words) \_\_\_\_\_

(b) This Bank Guarantee shall remain valid until \_\_\_\_\_ (hereinafter the expiry date of this guarantee) the Bank Guarantee will cease to be valid after \_\_\_\_\_ irrespective whether the Original Guarantee is returned to us or not.

(c) We are liable to pay guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written demand or a claim in writing on or before \_\_\_\_\_ (Expiry Date).

Dated the \_\_\_\_\_ day of \_\_\_\_\_ (month and year)

Place :

Signed and delivered by \_\_\_\_\_ (Name of the bank)

Through its authorised signatory

(Signature with seal)

**Annexure III to Appendix G**  
(Refers to Para 2 of Appendix G)

**BANK GUARANTEE FORMAT FOR PERFORMANCE-CUM-WARRANTY**

To

The \_\_\_\_\_  
Ministry of \_\_\_\_\_  
Government of India  
\_\_\_\_\_ (complete postal address of the beneficiary)

Dear Sir,

1. Whereas President of India represented by the \_\_\_\_\_ Ministry of \_\_\_\_\_, Government of India (hereinafter referred to as BUYER) have entered into a Contract No. \_\_\_\_\_ dated \_\_\_\_\_ (hereinafter referred to as the said Contract) with M/s. \_\_\_\_\_ (hereinafter referred to as the SELLER) for supply of goods as per Contract to the said BUYER and whereas the SELLER has undertaken to produce a bank guarantee amounting to Rs/ US \$/Euro/PS £/Yen/AUD/SGD \_\_\_\_\_ which is 3% of the Total Contract Price (including taxes and duties) to cover 3% of Total Contract Price (including taxes and duties) each for Performance and Warranty in sequence, to secure its obligations towards Performance-cum-Warranty to the BUYERS.

2. We, the \_\_\_\_\_ bank hereby expressly, irrevocably and unreservedly undertake the guarantee as principal obligors on behalf the SELLER that, in the event that the BUYER declares to us that the amount claimed is due by way of loss or damage caused to or would be caused or suffered by the BUYER by reason of breach/failure to perform by the said SELLER of any of the terms and conditions in the Contract related to Performance and Warranty clauses, we will pay you, on demand and without demur, all and any sum up to {3% of Total Contract Price (including taxes and duties)} \_\_\_\_\_ Rupees/ US \$/Euro/PS £/Yen/AUD/SGD only at any instance under this Guarantee. Your written demand shall be conclusive evidence to us that such repayment is due under the terms of the said Contract. We shall not be entitled to ask you to establish your claim or claims under this guarantee but will pay the same forthwith without any protest or demur. We undertake to effect payment upon receipt of such written demand.

3. We shall not be discharged or released from the undertaking and guarantee by any arrangements, variations made between you and the SELLER, indulgence to the SELLER by you, or by any alterations in the obligations of the SELLER or by any forbearance whether as to payment, time performance or otherwise.

4. We further agree that any such demand made by the BUYER on the Bank shall be conclusive, binding, absolute and unequivocal notwithstanding any difference or dispute or controversy that may exist or arise between you and the SELLER or any other person.

5. In no case shall the amount of this guarantee be increased.

6. This Performance-cum-Warranty guarantee shall remain valid for a period until three months beyond the warranty period as specified in the Contract i.e. up to \_\_\_\_\_.

7. Subject to the terms of this Bank Guarantee, the issuing bank hereby irrevocably authorizes the beneficiary to draw the amount of up to Rs/ US \$/Euro/PS £/Yen/AUD/SGD \_\_\_\_\_ {3% of Total Contract Price (including taxes and duties)} for breach/failure to perform by the SELLER of any of the terms and conditions of the Contract related to performance and warranty clause. Partial drawings and multiple drawings under this Bank Guarantee are allowed within the above stated cumulative amount subject to each such drawing not exceeding 3% of the Total Contract Price (including taxes and duties) (Rs/ US \$/Euro/PS £/Yen/AUD/SGD \_\_\_\_\_ only) (Mention BG amount).

8. This guarantee shall be continuing guarantee and shall not be discharged by any change in the constitution of the Bank or in the constitution of M/s \_\_\_\_\_. We undertake not to revoke this guarantee during the currency except with previous consent of BUYER in writing.

9. Notwithstanding anything contained herein above:

(a) Our liability under this Guarantee shall not exceed Rs/ US \$/Euro/PS £/Yen/AUD/SGD \_\_\_\_\_ (Rupees \_\_\_\_\_ only (in words)).

(b) This Bank Guarantee shall remain valid until 3 months from the date of expiry of warranty period of the Contract, i.e up to \_\_\_\_\_ (mention the date) which is 3 months after expiry of the warranty period and the BG shall cease to be valid after \_\_\_\_\_ irrespective whether the Original Guarantee is returned to us or not.

(c) We are liable to pay guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written demand or a claim in writing on or before \_\_\_\_\_ (Expiry Date).

Dated the \_\_\_\_\_ day of \_\_\_\_\_ (month and year)

Place :

Signed and delivered by \_\_\_\_\_ (name of the bank)

Through its authorised signatory  
(Signature with seal)

**Annexure IV to Appendix G**  
(Refers to Para 5 of Appendix G)

**FORMAT FOR EXTENSION OF DELIVERY PERIOD/PERFORMANCE NOTICE**

Name of the Procuring Entity.....

Extension of Delivery Period/Performance Notice

To  
M/s (name and address of firm)

Sub: Contract No..... dated.....for the supply of.....

Ref: Your letter no. .... dated: .....

Dear Sir,

1. You have failed to deliver {the (fill in qty.) of Stores/the entire quantity of Stores} within the contract delivery period [as last extended up to] (fill in date). In your letter under reply you have asked for [further] extension of time for delivery. In view of the circumstances stated in your said letter, the time for delivery is extended from (fill in date) to (fill in date).

2. Please note that notwithstanding the grant of this extension in terms of Clause (fill in clause number) of the subject contract an amount equivalent to ..... % (..... per cent) of the delivered price of the delayed goods for each week of delay or part thereof (subject to the ceiling as provided in the aforesaid clause) beyond the original contract delivery date/the last unconditionally re-fixed delivery date (as & if applicable), viz., (fill in date) will be recovered from you as liquidated damages. You may now tender the Stores for inspection [balance of the Stores] in terms of this letter. Stores if any already tendered by you for inspection but not inspected will be now inspected accordingly.

3. You are also required to extend the validity period of the performance guarantee for the subject contract from (fill in present validity date) to (fill in required extended date) within 15 (fifteen) days of issue of this amendment letter.

4. The above extension of delivery date will also be subject to the following Denial Clause:-

(a) That no increases in price on account of any statutory increase in or fresh Imposition of customs duty, GST or on account of any other taxes/duty, including custom duty), leviable in respect of the Stores specified in the said contract which takes place after (insert the original delivery date) shall be admissible on such of the said Stores, as are delivered after the said date; and,

(b) That notwithstanding any stipulation in the contract for increase in price on any other ground including foreign exchange rate variation, no such increase which takes place after (insert the reckoning date as per DAP 2020) shall be admissible on such of the said Stores as are delivered after the said date.

(c) But nevertheless, the Buyer shall be entitled to the benefit of any decrease in price on account of reduction in or remission of customs duty, GST or on account of any other Tax or duty or on any other ground as stipulated in the price variation clause or foreign exchange rate variation which takes place after (insert the original delivery date).

5. All other terms and conditions of the contract remain unaltered. This is without any prejudice to Buyer's rights under the terms and conditions of the subject contract.

6. Please intimate your unconditional acceptance of this amendment letter within 10 (ten) days of the issue of this letter failing which the contract will be cancelled at your risk and expense without any further reference to you.

Yours faithfully,  
(Authorised Officer)  
Duly authorised,  
for and on behalf of  
The President of India

**Note:** Select one option within { } brackets; delete portion within [ ] brackets, if not applicable; fill in ( ) brackets. Brackets and this note are not to be typed.

Substitute following first para instead of first para in format above, for issuing a performance notice.

1. You have failed to deliver {the (fill in qty.) of Stores/the entire quantity of Stores} within the contract delivery period [as last extended up to] (fill in date). In spite of the fact that the time of delivery of the goods stipulated in the contract is deemed to be of the essence of the contract, it appears that (fill in the outstanding quantity) are still outstanding even though the date of delivery has expired. Although not bound to do so, the time for delivery is extended from (fill in date) to (fill in date) and you are requested to note that in the event of your failure to deliver the goods within the delivery period as hereby extended, the contract shall be cancelled for the outstanding goods at your risk and cost.



**Annexure V to Appendix G**

(Refers to Para 9 of RFP and Para 1.4 of Appendix G)

**DELIVERY SCHEDULE AND STAGES OF PAYMENT**

1. The terms of payment may vary between each project depending upon a variety of factors such as complexity of equipment/system, requirement of validation trials for establishing 'proof of concept', delivery period, integration requirements etc. However, some broad guidelines for payments terms are appended in subsequent Paras.

**2. For Delivery in Lots/ Batches**

SI	Activity	Delivery Timelines (T <sub>0</sub> + Months)	Quantity		Scheme for Payment	Scheme for submission and Return of Advance Payment Bank Guarantees	Remarks
			Guns	Ammunition			
(a)	Signing of contract	T <sub>0</sub>	-	-	15% of the total contract price	APBG of equivalent amount to be submitted	T <sub>0</sub> is Date of Advance Payment
b)	<b>On Dispatch of all equipment/system</b>						
(i)	1 <sup>st</sup> Lot/ Batch	T <sub>0</sub> + 24	37 <sup>@</sup>	Advanced – 7215 Standard – 15725 <sup>#</sup>	45% Cost of Deliverables and re-imbursement of 100% taxes		@25 guns of 'Buy Portion' and 12 guns of 'Make Portion' of contract  #7000 rounds of ammunition of 'Buy Portion' and 8725 rounds of 'Make Portion'
(ii)	Complete ESP less MRLS	T <sub>0</sub> + 24	-	-	45% Cost of Deliverables and re-imbursement of 100% taxes		ESP To include SMTs, STEs and Technical Documentation
(iii)	2 <sup>nd</sup> Lot/ Batch	T <sub>0</sub> + 36	40	Advanced– 7800 Standard – 17000	45% Cost of Deliverables and re-imbursement of 100% taxes		All guns and Standard Ammunition of 'Make Portion'
(iv)	3 <sup>rd</sup> Lot/ Batch	T <sub>0</sub> + 48	55	Advanced– 10725 Standard – 23375	45% of the Cost of Deliverables and re-imbursement of 100% taxes		All guns and Standard Ammunition of 'Make Portion'

SI	Activity	Delivery Timelines (T <sub>0</sub> + Months)	Quantity		Scheme for Payment	Scheme for submission and Return of Advance Payment Bank Guarantees	Remarks
			Guns	Ammunition			
(v)	4 <sup>th</sup> Lot/ Batch	T <sub>0</sub> + 60	60	Advanced – 11700 Standard – 25500	45% Cost of Deliverables and re-imbursement of 100% taxes		All guns and Standard Ammunition of 'Make Portion'
(vi)	5 <sup>th</sup> Lot/ Batch	T <sub>0</sub> + 66	28	Standard – 22536	45% Cost of Deliverables and re-imbursement of 100% taxes		All guns and Standard Ammunition of 'Make Portion'
(vii)	MRLS	As per warranty period of guns supplied	-	-	45% Cost of Deliverables and re-imbursement of 100% taxes		MRLS to be supplied six months prior to expiry of warranty
<b>c) On Delivery of all equipment/ system</b>							
(i)	1 <sup>st</sup> Lot/ Batch	T <sub>0</sub> + 24	37 <sup>@</sup>	Advanced – 7215 Standard – 15725 <sup>#</sup>	35% of the cost of deliverables of the Lot	APBG is to be returned on pro-rata basis on delivery of each lot/batch.	
(ii)	Complete ESP less MRLS	T <sub>0</sub> + 24	-	-	35% of the cost of deliverables		<b>To include SMTs, STEs and Technical Documentation</b>
(iii)	2 <sup>nd</sup> Lot/ Batch	T <sub>0</sub> + 36	40	Advanced – 7800 Standard – 17000	35% of the cost of deliverables of the Lot		
(iv)	3 <sup>rd</sup> Lot/ Batch	T <sub>0</sub> + 48	55	Advanced – 10725 Standard – 23375	35% of the cost of deliverables of the Lot		
(v)	4 <sup>th</sup> Lot/ Batch	T <sub>0</sub> + 60	60	Advanced – 11700 Standard – 25500	35% of the cost of deliverables of the Lot		
(vi)	5 <sup>th</sup> Lot/ Batch	T <sub>0</sub> + 66	28	Standard – 22536			

SI	Activity	Delivery Timelines (T <sub>0</sub> + Months)	Quantity		Scheme for Payment	Scheme for submission and Return of Advance Payment Bank Guarantees	Remarks
			Guns	Ammunition			
(vii)	Completion of Training				85% of the cost of Training		
(viii)	Delivery of MRLS	As per warranty period of guns supplied	-	-	35% of the cost of deliverables		Refer note (i) below
(d)	After Verification of IC Content and Absorption of Technology by Board Of Officers				Bal 5% of the base contract price		

**Note:** Delivery of the deliverables pertaining to ESP shall be as under:-

(i) **MRLS**. MRLS to be delivered on pro rata basis and delivery to commence not before twelve months and to be completed by six months before the expiry of warranty period of the lot.

(ii) **SMT/STEs, Technical Literature**. The entire quantity of SMT/STEs and minimum four sets of Technical Literature to be delivered along with the first lot of equipment and prior to the conduct of training by OEM, whichever is earlier.

**Appendix H**

(Refers to Para 48 and 57(b) of RFP)

**EVALUATION CRITERIA AND PRICE BID FORMAT**

1. **Evaluation Criteria.** The guidelines for evaluation of Bids will be as follows:-

1.1. Only those Bids will be evaluated, which are found to be fulfilling all the eligibility and qualifying requirements of the RFP, both technically and commercially. The bidder, whose price is arrived as lowest as per Evaluation criteria given in this Appendix, will be declared as L-1 bidder by Buyer.

- 1.2 **In 'Buy (Indian-IDDM)', 'Buy (Indian)' and 'Buy & Make Indian' Cases'.**

1.2.1 **Where DCF Technique as Given in Para 4 is Not Applicable.** L-1 bidder will be determined on the basis of quoted cost of all items including taxes and duties payable to Central/State/Local Governments but with exclusion of BNE items sourced from common single source in accordance with Para 109 of Chapter II of DAP-20. The scope of BNE cost shall include the basic cost of the Main Equipment and OEM Training, Training Aggregates, Documentation, SMT/STE, Freight and OBS as applicable/as indicated in the RFP, which are exclusively sourced from the nominated vendor (OEM). No other cost including the cost of items sourced directly from third parties and the cost of activities jointly undertaken by the Bidder/Bidder's sub vendor and the nominated vendor (OEM) or any third parties are to be included in the BNE cost. BNE rate would also be separately negotiated. However, payment will be made after adding the actual cost of BNE, at the time of purchase from OFB/DPSU/Private vendor, to the L1 cost determined as mentioned above.

1.2.2 **Where DCF Technique as Given in Para 4 is Applicable.** DCF technique will be applied on quoted cost of all items including taxes and duties payable to Central/State/Local Governments to ascertain the NPV which would be used for determining L1 bidder, but with exclusion of BNE items sourced from common single source in accordance with Para 109 of Chapter II of DAP-20. The scope of BNE cost shall include the basic cost of the Main Equipment and OEM Training, Training Aggregates, Documentation, SMT/STE, Freight and OBS as applicable/as indicated in the RFP, which are exclusively sourced from the nominated vendor (OEM). No other cost including the cost of items sourced directly from third parties and the cost of activities jointly undertaken by the Bidder/Bidder's sub vendor and the nominated vendor (OEM) or any third parties are to be included in the BNE cost. BNE rate would also be separately negotiated. However, payment will be made after adding the actual cost of BNE, at the time of purchase from OFB/DPSU/Private vendor, to the L1 cost determined as mentioned above.

1.3 Custom duty on input materials shall not be loaded by the Indian Bidders in their price bids, if they are exempted under the existing Notifications. In such cases, necessary Custom Duty Exemption Certificate (CDEC) shall be issued by the Buyer. In

cases where Custom Duty is not exempted, Basic Custom Duty on input material is to be included in the cost of Basic Equipment, Installation/Commissioning/Integration, BNE, ToT, MRLS, SMT, STE, ESP and any other item listed at Column (ii) of Para 2 below.

1.4 If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected based on indicative rates of taxes and duties at columns (vi) and (vii) of Para 2 below. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price.

2. **Price Bid Format.** The Price Bid Format is given below and Bidders are required to fill this correctly with full details. No column of the Bid format has to be left blank. The clubbing of serials/sub serials to indicate a consolidated cost is not acceptable. Columns of 'quantity', 'unit cost', 'total cost (including all taxes and duties)', 'GST/IGST (%) and Custom Duty (%)' are to be filled up with '0', 'positive numerical values' or 'Not Applicable' at every row as applicable. If any column is not applicable and intentionally left blank, the reason for the same has to be clearly indicated in the remarks column.

Ser	Items	Qty	Unit Cost	Total Cost (iii) x (iv)	Indicative Rate of Taxes & Duties used to arrive at Total Cost (as applicable)		Total Cost (including all taxes & duties) (v) + (vi) + (vii)	Remarks
					GST/IGST (%)	Custom Duty (%)		
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
A.	Cost of <b>Basic Equipment</b> . Full break-up details may be given.							
B.	Cost of <b>Manufacturer's Recommended List of Spares</b> as per the format given at <b>Annexure I</b> to <b>Appendix E</b> . In case equipment is already in usage, the spare parts requirement must be specific rather than being based on MRLS.							
C.	Cost of <b>Special Maintenance Tools and Special Test Equipment</b> as per format given at <b>Annexure II</b> to <b>Appendix E</b> .							
D.	Cost of <b>Operator's Manual and Technical Literature</b> (in English Language) including Illustrated Spare Parts List as per <b>Annexure III</b> to <b>Appendix E</b> .							

Ser	Items	Qty	Unit Cost	Total Cost (iii) x (iv)	Indicative Rate of Taxes & Duties used to arrive at Total Cost (as applicable)		Total Cost (including all taxes & duties) (v) + (vi) + (vii)	Remarks
					GST/IGST (%)	Custom Duty (%)		
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
E.	Cost of <b>Training Aids</b> such as simulators, cut out models, films, charts etc as recommended by the supplier as per <b>Annexure IV</b> to <b>Appendix E</b> .							
F.	Cost of recommended period of <b>Training</b> as per Para 16 of RFP.							
G.	<b>Any other</b> cost (to be specified).							
H.	<b>Freight and Transit Insurance</b> Cost (where applicable).							
J.	<b>Total Cost</b> (Total of Serial A to H)						#	# This will be used in determining L1 vendor (duly applying provisions of Para 1 above).
K.	<b>Foreign Exchange component</b> of the proposal. (for Indian Vendors only)							This will be with reference to Para 1.2. of Appendix G.
L.	<b>CDEC (if applicable)</b> , its authority and amount for which required.							

**Note: Taxes and Duties.** All Indirect Taxes and Duties will be paid at actuals or as indicated in the Commercial bid by the Bidder, whichever is lower. In case of any change in the tax structure/rates by BUYER's Government, only incremental/decremented change will be paid.

3. **Evaluation of Bids by DCF Technique** (Note: This clause is to be included only if there is AMC/CMC/PBL/LCSC clause or any other condition in RFP, resulting in different cash outflows in successive years) -

**3.1 Net Present Value (NPV)** is a variant of DCF method, which will be used by the Buyer for evaluation of Bids. The Net Present Value of a Bid will be equal to the sum of the present values of all the cash flows associated with it. The following formula will be used for calculating NPV of a bid -

$$NPV_n = \sum_{t=1}^n A_t / (1 + r)^t$$

Where,

$NPV$  = Net Present Value

$A_t$  = Expected cash flow occurring at the end of year 't' as mentioned in the Payment schedule of Bid

$n$  = Duration of cash flow stream

$r$  = Discounting Rate

$t$  = The period after which payment is done

The bid with the lowest NPV would be selected.

3.2. The Discounting rate will be \_\_ %". (Note-This will be the Government of India's lending rate on loans given to state governments, as notified by Budget Division of Ministry of Finance annually)

3.3. **Structuring Cash Flows for Tenders/ Bids Received in the Same Currency.** The cash outflows as shown in price bids will be taken into consideration. NPV of different bids will be calculated using the formula given above and the one having lowest NPV will be selected as L-1.

3.4 **Structuring Cash Flows for Tenders/Bids Received in Different Currencies.** Where bids are received in different currencies/combination of currencies, the cash outflow will be brought to a common denomination in rupees by converting foreign currency bids into rupees by taking into account the BC selling rate of Parliament Street Branch of State Bank of India, New Delhi on the ERV reckoning date (as defined in **Annexure I to Appendix G**), ie the last date of submission of Commercial Bids as per RFP. Thereafter, the procedure as described above in Para 3.3 will be applied to arrive at NPV.

3.5 All bidders are required to indicate year-wise and currency-wise amount required as per their price bid in format given below. In case the firm a bidder does not provide year-wise cash flow details in price bid, the amount quoted in their price bid will not be discounted for comparison purposes.

Year	Dollars	Euros	Pound Sterling	Rupees	Total Cash-flow



**Appendix J**  
(Refers to Para 53 of RFP)

**STANDARD CONDITIONS OF RFP**

**LAW**

1. The present Contract shall be considered and made in accordance to the laws of Republic of India.

**ARBITRATION**

(For Indian Private Vendors)

2.1 All disputes or differences arising out of or in connection with the present Contract, including the one connected with the validity of the present Contract or any part thereof, shall be settled by bilateral discussions.

2.2 Any dispute, disagreement or question arising out of or relating to this Contract or relating to construction or performance (except as to any matter the decision or determination whereof is provided for by these conditions), which cannot be settled amicably, shall within sixty (60) days or such longer period as may be mutually agreed upon, from the date on which either party informs the other in writing by a notice that such dispute, disagreement or question exists, will be referred to the Arbitration Tribunal consisting of three arbitrators.

2.3 Within sixty (60) days of the receipt of the said Notice, one arbitrator shall be nominated in writing by SELLER and one arbitrator shall be nominated by BUYER.

2.4 The third arbitrator, shall be nominated by the parties within ninety (90) days of the receipt of the notice mentioned above, failing which the third arbitrator may be nominated under the provision of Indian Arbitration and Conciliation Act, 1996 (as amended from time to time) or by dispute resolution institutions like Indian Council of Arbitration or ICADR, at the request of either party, but the said nomination would be after consultation with both the parties. The arbitrator nominated under this Clause shall not be regarded nor act as an umpire.

2.5 The Arbitration Tribunal shall have its seat in New Delhi or such other place in India as may be decided by the arbitrator.

2.6 The Arbitration Proceedings shall be conducted in India under the Indian Arbitration and Conciliation Act, 1996 (as amended from time to time) and the award of such Arbitration Tribunal shall be enforceable in Indian Courts only.

2.7 The decision of the majority of the arbitrators shall be final and binding on the parties to this contract.

2.8 Each party shall bear its own cost of preparing and presenting its case. The cost of arbitration including the fees and expenses of the third arbitrator shall be shared equally by the SELLER and the BUYER.

2.9 In the event of a vacancy caused in the office of the arbitrators, the party which nominated such arbitrator, shall be entitled to nominate another in his place and the arbitration proceedings shall continue from the stage they were left by the retiring arbitrator.

2.10 In the event of one of the parties failing to nominate its arbitrator within sixty (60) days as above or if any of the parties does not nominate another arbitrator within sixty (60) days of the place of arbitrator falling vacant, then the other party shall be entitled after due notice of at least thirty (30) days to request dispute resolution institutions in India like Indian Council of Arbitration and ICADR to nominate another arbitrator as above.

2.11 If the place of the third arbitrator falls vacant, his substitute shall be nominated according to the provisions herein above stipulated.

2.12 The parties shall continue to perform their respective obligations under this contract during the pendency of the arbitration proceedings except in so far as such obligations are the subject matter of the said arbitration proceedings.

### **ARBITRATION**

(For Central & State PSEs)

3. In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator 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 (as amended from time to time) 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 a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary/Additional Secretary, when so authorised by the Law Secretary, whose decision shall bind the Parties finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

### **ARBITRATION**

(For Defence PSUs)

4. In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party to the Arbitrator(s) appointed by Defence Secretary. The award of the Arbitrator(s) shall be binding upon the parties to the dispute.

### **FORCE MAJEURE**

5.1 Should any force majeure circumstances arise, each of the contracting party shall be excused for the non-fulfillment or for the delayed fulfillment of any of its contractual obligations, if the affected party within (30 days) of its occurrence informs in a written form the other party.

5.2 Force majeure shall mean fires, floods, natural disasters or other acts such as war, turmoil, strikes, sabotage, explosions, beyond the control of either party.

5.3 Provided the acts of The Government or any state parties of the seller which may affect the discharge of the Seller's obligation under the contract shall not be treated as Force Majeure.

### **PENALTY FOR USE OF UNDUE INFLUENCE**

6.1 The Seller undertakes that he has not given, offered or promised to give, directly or indirectly any gift, consideration, reward, commission, fees brokerage or inducement to any person in service of the Buyer or otherwise in procuring the Contracts or forbearing to do or for having done or for borne to do any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government. Any breach of the aforesaid undertaking by the seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the seller) or the commission of any offence by the seller or anyone employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1988 or any other Act enacted for the prevention of corruption shall entitle the Buyer to cancel the contract and all or any other contracts with the seller and recover from the seller the amount of any loss arising from such cancellation. A decision of the buyer or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller.

6.2 Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the seller towards any officer/employee of the buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Buyer.

### **INTEGRITY PACT**

7.1 Further signing of an 'Integrity Pact' would be considered between government department and the bidder for schemes exceeding ₹ **20 Crores**. The Integrity Pact is a binding agreement between the agency and bidders for specific contracts in which the agency promises that it will not accept bribes during the procurement process and bidders promise that they will not offer bribes. Under the IP, the bidders for specific services or contracts agree with the procurement agency or office to carry out the procurement in a specified manner. The essential elements of the IP are as follows:-

- (a) A pact (contract) between the Government of India (Ministry of Defence) (the authority or the "principal") and those companies submitting a tender for this specific activity (the "bidders");

- (b) An undertaking by the principal that its officials will not demand or accept any bribes, gifts, etc., with appropriate disciplinary or criminal sanctions in case of violation;
- (c) A statement by each bidder that it has not paid and will not pay, any bribes;
- (d) An undertaking by each bidder that he shall not pay any amount as gift, reward, fees, commission or consideration to such person, party, firm or institution (including Agents and other as well as family members, etc., of officials), directly or indirectly, in connection with the contract in question. All payments made to the Agent 12 months prior to tender submission would be disclosed at the time of tender submission and thereafter an annual report of payments would be submitted during the procurement process or upon demand of the MoD.
- (e) The explicit acceptance by each bidder that the no-bribery commitment and the disclosure obligation as well as the attendant sanctions remain in force for the winning bidder until the contract has been fully executed;
- (f) Undertakings on behalf of a bidding company will be made "in the name and on behalf of the company's chief executive officer";
- (g) The following set of sanctions shall be enforced for any violation by a bidder of its commitments or undertakings:
  - (i) Denial or loss of contract;
  - (ii) Forfeiture of the IPBG and Guarantee for Performance-cum-Warranty Bond;
  - (iii) Payment to the Buyer of any such amount paid as gift, reward, fees or consideration along with interest at the rate of 2% per annum above LIBOR rate.
  - (iv) Refund of all sums already paid by the Buyer along with interest at the rate of 2% per annum above LIBOR rate.
  - (v) Recovery of such amount, referred to in (iii) and (iv) above, from other contracts of the Seller with the Government of India.
  - (vi) At the discretion of the Buyer, the Seller shall be liable for action as per extant policy on Putting on Hold, Suspension and Debarment of Entities.
- (h) Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.
- (j) The draft Pre-Contract Integrity Pact is attached as **Annexure I to this Appendix**. The vendors are required to sign them and submit separately along with the technical and commercial offers.
- (k) Every Bidder while submitting techno commercial bid shall also deposit ₹25 Crore

as **IPBG/Security deposit** through any of the instruments mentioned at **Para 8** of Annexure I. This would be submitted in a separate envelope clearly marked as IPBG along with technical and commercial proposals.

7.2 In respect of bids from DPSUs, the concerned DPSU shall enter in to a Pre-Contract Integrity Pact, on the same lines with their sub-vendors individually, in case the estimated value of each sub-contract(s) exceed ₹ 20 Crore and such subcontract(s) are required to be entered in to by the DPSU with a view to enable DPSU to discharge the obligations arising out of their bid in question in response to this RFP.

### **AGENTS**

8. The Seller confirms and declares to the Buyer that the Seller is the original manufacturer of the stores referred to in this contract. The Seller confirms that he has not engaged any person, party, firm or institution as an Agent including his Agents already intimated to MoD; to, influence, manipulate or in any way to recommend to any functionaries of the Government of India, whether officially or unofficially, to the award of the contract to the Seller, or to indulge in corrupt and unethical practices. The Seller has neither paid, promised nor has the intention to pay to any person, party, firm or institution in respect of any such intervention or manipulation. The Seller agrees that if it is established at any time to the satisfaction of the buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that Seller has engaged any such person, party, firm or institution and paid, promised or has intention to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution, whether before or after the signing of this contract, the Seller will be liable for any or all of the following actions:-

- (a) To pay to the Buyer any such amount paid as gift, reward, fees or consideration along with interest at the rate of 2% per annum above LIBOR rate.
- (b) The Buyer will also have a right to put on hold or cancel the Contract either wholly or in part, without any entitlement or compensation to the Seller who shall in such event be liable to refund all payments made by the Buyer in terms of the Contract along with interest at the rate of 2% per annum above LIBOR rate
- (c) The Buyer will also have the right to recover any such amount referred in (a) and (b) above from other contracts of the Seller with the Government of India.
- (d) At the discretion of the Buyer, the Seller shall be liable for action as per extant policy on Putting on Hold, Suspension and Debarment of Entities

9. In case it is found to the satisfaction of the BUYER that the SELLER has engaged an Agent, or paid commission or influenced any person to obtain the contract as described in clauses relating to Agents and clauses relating to Penalty for Use of Undue Influence, the SELLER, on demand of the BUYER shall provide necessary information/inspection of the relevant financial documents/ information, including a copy of the contract(s) and details of payment terms between the vendors and Agents engaged by him.

**Annexure I to Appendix J**  
(Refers to Para 7.1 (j) of Appendix J)

**PRE-CONTRACT INTEGRITY PACT**

**General**

1. Whereas the PRESIDENT OF INDIA, represented by Joint Secretary & Acquisition Manager (Army/Air Force/Maritime & Systems)/Major General & equivalent, Service Headquarters./Coast Guard, Ministry of Defence, Government of India, hereinafter referred to as the Buyer and the first party, proposes to procure (Name of the Equipment), hereinafter referred to as Defence Stores and M/s \_\_\_\_\_ represented by, \_\_\_\_\_ Chief Executive Officer (which term, unless expressly indicated by the contract, shall be deemed to include its successors and its assignees), hereinafter referred to as the Bidder/Seller and the second party, is willing to offer/has offered the Defence stores.

2. Whereas the Bidder is a private company/public company/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the Buyer is a Ministry of the Government of India performing its functions on behalf of the President of India.

**Objectives**

3. Now, therefore, the Buyer and the Bidder agree to enter into this pre-contract agreement, hereinafter referred to as Integrity Pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/unprejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:

3.1 Enabling the Buyer to obtain the desired defence stores at a competitive price in conformity with the defined specifications of the Services by avoiding the high cost and the distortionary impact of corruption on public procurement

3.2 Enabling Bidders to abstain from bribing or any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also refrain from bribing and other corrupt practices and the Buyer will commit to prevent corruption, in any form, by their officials by following transparent procedures.

**Commitments of the Buyer**

4. The Buyer commits itself to the following:-

4.1 The Buyer undertakes that, no official of the Buyer, connected directly or indirectly with the contract will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the Bidder, either for themselves or for any person, organisation or third party related to the contract in exchange for an

advantage in the bidding process, bid evaluation, contracting or implementation process related to the Contract.

4.2 The Buyer will, during the pre-contract stage, treat all Bidders alike and will provide to all Bidders the same information and will not provide any such information to any particular Bidder which could afford an advantage to that particular Bidder in comparison to other Bidders.

4.3 All the officials of the Buyer will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

5. In case of any such preceding misconduct on the part of such official(s) is reported by the Bidder to the Buyer with full and verifiable facts and the same is prima facie found to be correct by the Buyer, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Buyer and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the Buyer the proceedings under the contract would not be stalled.

### **Commitments of Bidders**

6. The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commits himself to the following:

6.1 The Bidder will not to offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer, connected directly or indirectly with the bidding process, or to any person, organisation or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the Contract.

6.2 The Bidder further undertakes that he has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government.

6.3 The Bidder will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

6.4 The Bidder will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

6.5 The Bidder further confirms and declares to the Buyer that the Bidder is the original manufacturer/integrator/authorised government sponsored export entity of the Defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the Buyer or any of its functionaries, whether officially or unofficially to the award of the contract to the Bidder, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company or Agent in respect of any such intercession, facilitation or recommendation.

6.6 The bidder would not enter into conditional contract with any Agents, brokers or any other intermediaries wherein payment is made or penalty is levied, directly or indirectly, on success or failure of the award of the contract. The bidder while presenting the bid, shall disclose any payments he has made during the 12 months prior to tender submission or is committed to or intends to make to officials of the buyer or their family members, Agents, brokers or any other intermediaries in connection with the contract and the details of such services agreed upon for such payments. Within the validity of PCIP, bidder shall disclose to MoD any payments made or has the intention to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution as an annual report during the procurement process.

6.7 The Bidder shall not use improperly, for purposes of competition or personal gain or pass on to others, any information provided by the Buyer as part of the business relationship regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder also undertakes to exercise due and adequate care lest any such information is divulged.

6.8 The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts. Complaint will be processed as per **Guidelines for Handling of Complaints** in vogue. In case the complaint is found to be vexatious, frivolous or malicious in nature, it would be construed as a violation of Integrity Pact.

6.9 The Bidder shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

## 7. **Previous Transgression**

7.1 The Bidder declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India.

7.2 If the Bidder makes incorrect statement on this subject, Bidder can be disqualified from the tender process or the contract and if already awarded, can be terminated for such reason.

## 8. **Integrity Pact Bank Guarantee (IPBG)**

8.1. Every bidder, while submitting commercial bid, shall submit an Integrity Pact Bank Guarantee for an amount of 25 Crores in favour of the Buyer in Indian Rupees only.



(i) Guarantee will be from Indian Public or Private Scheduled Commercial Bank (as notified by RBI) , promising payment of the guaranteed sum to the Ministry of Defence, Government of India, represented on behalf of the President of India, on demand within five working days without any demur whatsoever and without seeking any reasons whatsoever. The demand for payment by the buyer shall be treated as conclusive proof for payment. A model Bank Guarantee format is enclosed.

8.2 The Integrity Pact Bank Guarantee (IPBG) shall be valid up to Three years from the date of submission. However, Bidders will be required to extend the Integrity Pact Bank Guarantee, as and when required by the Buyer. In the case of the successful bidder, validity of the Integrity Pact Bank Guarantee will be extended up to the satisfactory completion of the Contract. In case a vendor unilaterally decides to withdraw from the procurement scheme or has been declared non-compliant and if he wishes to withdraw his IPBG, he may do so provided he gives an undertaking that he has no complaints and will not make any complaints in the case. Integrity Pact Bank Guarantee shall be returned promptly in case of unsuccessful bidders.

8.3 In the case of successful bidder a clause would also be incorporated in the Article pertaining to Performance-cum-Warranty Bond in the Purchase Contract that the provisions of Sanctions for Violation shall be applicable for forfeiture of Performance Bond in case of a decision by the Buyer to forfeit the same without assigning any reason for imposing sanction for violation of this pact.

8.4 The provisions regarding Sanctions for Violation in Integrity Pact include forfeiture of Performance-cum-Warranty Bond in case of a decision by the Buyer to forfeit the same without assigning any reason for imposing sanction for violation of Integrity Pact.

8.5 No interest shall be payable by the Buyer to the Bidder(s) on IPBG for the period of its currency.

## 9. **Company Code of Conduct**

9.1 Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.

## 10. **Sanctions for Violation**

10.1 Any breach of the aforesaid provisions by the Bidder or any one employed by him or acting on his behalf (whether with or without the knowledge of the Bidder) or the commission of any offence by the Bidder or any one employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act 1988 or any other act enacted for the prevention of corruption shall entitle the Buyer to take all or any one of the following actions, wherever required:

(i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the Bidder. However, the proceedings with the other Bidder(s) would continue.

- (ii) The IPBG/Performance-cum-Warranty Bond shall stand forfeited either fully or partially, as decided by the Buyer and the Buyer shall not be required to assign any reason therefore.
- (iii) To immediately cancel the contract, if already signed, without any compensation to the Bidder.
- (iv) To recover all sums already paid by the Buyer, in case of an Indian Bidder with interest thereon at 2% higher than the prevailing Base Rate of SBI and in case of a Bidder from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the Bidder from the Buyer in connection with any other contract for any other defence stores, such outstanding payment could also be utilised to recover the aforesaid sum and interest.
- (v) To encash the advance bank guarantee and Performance-cum-Warranty Bond if furnished by the Bidder, in order to recover the payments, already made by the Buyer, along with interest.
- (vi) To cancel all or any other Contracts with the Bidder.
- (vii) To Put on Hold or Suspend or Debar the bidder as per the extant policy.
- (viii) To recover all sums paid in violation of this Pact by Bidder(s) to any Agent or broker with a view to securing the contract.
- (ix) If the Bidder or any employee of the Bidder or any person acting on behalf of the Bidder, either directly or indirectly, is closely related to any of the officers of the Buyer, or alternatively, if any close relative of an officer of the Buyer has financial interest/stake in the Bidder's firm, the same shall be disclosed by the Bidder at the time of filing of tender. Any failure to disclose the interest involved shall entitle the Buyer to debar the Bidder from the bid process or rescind the contract without payment of any compensation to the Bidder. The term '**close relative**' for this purpose would mean spouse whether residing with the Government servant or not, but not include a spouse separated from the Government servant by a decree or order of a competent court; son or daughter or step son or step daughter and wholly dependent upon Government servant, but does not include a child or step child who is no longer in any way dependent upon the Government servant or of whose custody the Government servant has been deprived of by or under any law; any other person related, whether by blood or marriage, to the Government servant or to the Government servant's wife or husband and wholly dependent upon Government servant.
- (x) The Bidder shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Buyer and if he does so, the Buyer shall be entitled forthwith to rescind the contract and all other contracts with the Bidder. The Bidder shall be liable to pay compensation for any loss or damage to the Buyer resulting from such

rescission and the Buyer shall be entitled to deduct the amount so payable from the money(s) due to the Bidder.

(xi) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the Buyer with the Bidder, the same shall not be opened.

10.2 The decision of the Buyer to the effect that a breach of the provisions of this Integrity Pact has been committed by the Bidder shall be final and binding on the Bidder, however, the Bidder can approach the Independent Monitor(s) appointed for the purposes of this Pact.

## 11. **Fall Clause**

11.1 The Bidder undertakes that he has not supplied/is not supplying the similar products, systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India and if it is found at any stage that the similar system or sub-system was supplied by the Bidder to any other Ministry/Department of the Government of India at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the Bidder to the Buyer, even if the contract has already been concluded.

11.2 The Bidder shall strive to accord the most favoured customer treatment to the Buyer in respect of all matters pertaining to the present case.

## 12. **Independent Monitors**

12.1 The Buyer has appointed Independent Monitors for this Pact in consultation with the Central Vigilance Commission. The names and addresses of nominated Independent Monitors (at the time of issue of RFP) are as follows (however the vendor must refer to the MoD website at [www.mod.nic.in](http://www.mod.nic.in) to check for changes to these details):-

(a) Shri Keshav Desiraju, IAS (UK:1978) (Retd)  
Flat B, 25 Radhakrishnan Salai, 9<sup>th</sup> Street,  
Mylapore, Chennai-600004  
**Email-** [keshavdesiraju@gmail.com](mailto:keshavdesiraju@gmail.com)

(b) Shri Arvind Kumar Awasthi, IAAS: 1975 (Retd)  
A-3/2, Yarrows Appartments, C-85/5,  
Sect-62, Noida  
**Email-** [arvind.awasthi@gov.in](mailto:arvind.awasthi@gov.in)

(c) Shri AK Manchanda, IRS: 1976 (Retd)  
B3/60, 3<sup>rd</sup> Floor, Safdarjung Enclave,  
New Delhi-110029  
**Email-** [ashokkmanchanda@gmail.com](mailto:ashokkmanchanda@gmail.com)

12.1A All communications to Independent Monitors will be copied to Director

(Vigilance). The Designation and Contact details of Director (Vigilance) are as follows:-

Director (Vigilance)  
Room No 340,  
B Wing, Sena Bhawan  
New Delhi 110011  
Tel No - 011 – 23012304

12.2 After the Integrity Pact is signed, the Buyer shall provide a copy thereof, along with a brief background of the case to the Independent Monitors, if required by them.

12.3 The Bidder(s), if they deem it necessary, may furnish any information as relevant to their bid to the Independent Monitors.

12.4 If any complaint with regard to violation of the IP is received by the buyer in a procurement case, the buyer shall refer the complaint to the Independent Monitors for their comments/enquiry.

12.5 If the Independent Monitors need to peruse the relevant records of the Buyer in connection with the complaint sent to them by the Buyer, the Buyer shall make arrangement for such perusal of records by the Independent Monitors.

12.6 The report of enquiry, if any, made by the Independent Monitors shall be submitted to the head of the Acquisition Wing of the Ministry of Defence, Government of India for a final and appropriate decision in the matter keeping in view the provision of this Pact.

### 13. **Examination of Books of Accounts**

In case of any allegation of violation of any provisions of this Integrity Pact or payment of commission, the Buyer or its agencies shall be entitled to examine the Books of Accounts of the Bidder and the Bidder shall provide necessary information of the relevant financial documents in English and shall extend all possible help for the purpose of such examination.

### 14. **Law and Place of Jurisdiction**

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the Buyer i.e. New Delhi.

### 15. **Other Legal Actions**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

### 16. **Validity**

16.1 The validity of this Integrity Pact shall be from date of its signing and extend up to 5 years or the complete execution of the contract to the satisfaction of both the Buyer and the Bidder/Seller, whichever is later.

16.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

17. The Parties hereby sign this Integrity Pact at \_\_\_\_\_ on

BUYER

\_\_\_\_\_  
MINISTRY OF DEFENCE,  
GOVERNMENT OF INDIA

Witness

1. \_\_\_\_\_  
2. \_\_\_\_\_

BIDDER

\_\_\_\_\_  
CHIEF EXECUTIVE OFFICER

Witness

1. \_\_\_\_\_  
2. \_\_\_\_\_

**Refers to Para 8.1 of  
Pre-Contract Integrity Pact**

**FORMAT OF INTEGRITY PACT BANK GUARANTEE (IPBG)**

To,

The \_\_\_\_\_,  
Ministry of \_\_\_\_\_,  
Government of India,  
\_\_\_\_\_ (complete postal address of the beneficiary)

1. In consideration of President of India represented by Joint Secretary and Acquisition Manager (Army/Air Force/Maritime & Systems) / Major General or equivalent, Service Hqr./Coast Guard, Ministry of Defence, Government of India (hereinafter referred to as the Buyer and/or the first party) having agreed to accept a sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) from M/s \_\_\_\_\_ of \_\_\_\_\_ (hereinafter referred to as Bidder and/or the Second party) in the form of Bank Guarantee towards Integrity Pact for the Request For Proposal for procurement of \_\_\_\_\_ we \_\_\_\_\_ (Name of the Bank), (hereinafter referred to as the Bank), do hereby undertake to pay to the Buyer on demand within 5 (five) working days-without any demur and without seeking any reasons whatsoever, an amount not exceeding Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) and the guarantee will remain valid upto three years from the date of its submission i.e. \_\_\_\_\_ (Submission date). The Integrity Pact Bank Guarantee shall be extended from time to time as required by the Buyer and agreed by the Bidder to the Bank.

2. We undertake not to revoke this guarantee during this period except with the previous consent of the Buyer in writing and we further agree that our liability under the Guarantee shall not be discharged by any variation in the term of the commercial offer.

3. No interest shall be payable by the Buyer to the Bidder(s) on the guarantee for the period of its currency.

4. Notwithstanding anything contained herein above:-

(a) Our liability under this Guarantee shall not exceed Rs \_\_\_\_\_ (Rupees \_\_\_\_\_ only) (in words).

(b) This Bank Guarantee shall remain valid until \_\_\_\_\_ (hereinafter the expiry date of this guarantee). The Bank Guarantee will cease to be valid after \_\_\_\_\_ irrespective whether the Original Guarantee is returned to us or not.

(c) We are liable to pay guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written demand or a claim in writing on or before \_\_\_\_\_ (Expiry Date)

Dated the \_\_\_\_\_ day of \_\_\_\_\_ (month and year)

Place :

Signed and delivered by \_\_\_\_\_ (Name of Bank).

Through its authorized signatory  
(Signature with seal)

**Appendix K**  
(Refers to Para 6 of RFP)

**CRITERIA FOR VENDOR SELECTION / PRE-QUALIFICATION**  
**FOR - RFP ISSUE / INCLUSION IN RFP REQUIREMENTS**  
**(Only For Multi Vendor Cases. Not applicable to DPSUs/PSUs.)**

1. The following parameters may be used, as a guideline for the Collegiate to adopt, for inclusion in the RFP.

<b><u>Sl No</u></b>	<b><u>Parameter</u></b>	<b><u>For all Cases except Shipbuilding (Ch XII), Make (Ch III &amp; IV) and Strategic Partnerships (Ch VII)</u></b>
<b>1</b>	<b>Financial</b>	
a	Credit Rating	Long term credit rating of CCR-BBB or better and SME-04 or better for SMEs as on 31 <sup>st</sup> March of the previous financial year
b	Average Annual Turn Over	Min Avg Annual Turnover for last 03 financial years, ending 31 <sup>st</sup> March of the previous financial year, should not be less than 30% of estimated annual outflow of project cost of the Buy (Indian-IDDM) and Buy (Indian) project and for Buy & Make (Indian) should not be less than 30% of estimated annual outflow of the project cost of the make portion.
c	Net Worth	Net worth of entities, ending 31 <sup>st</sup> march of the previous financial year, should not be less than 5% of the estimated cost of the Buy (Indian-IDDM) and Buy (Indian) project and for Buy & Make (Indian) should not be less than 5% of estimated cost of the Make portion. For orders above Rs 5000 Cr, the Network of group companies can be considered on production of suitable documentary assurance.
d	Insolvency	The entity should not be under insolvency resolution as per IBC at any stage of procurement process from the issuing of RFP to the signing of contract.
<b>2</b>	<b>Technical</b>	
a	Nature of Business	Manufacturing entity or System Integrator of defence equipment and not a trading company, except in cases where OEM participates only through its authorised Vendors.
b	Experience in related field	Min 02 Yrs. experience in broad areas like manufacturing/ engineering/ electronics/ explosives etc. as applicable in the instant case. If not, then cumulative experience of at least 03 years in above areas

		resulting in gaining of competence for manufacturing the proposed product. (In case SHQ feels that for particular equipment a lesser experience could be accepted, then the same should be specifically approved by the RFP approving authority before including the same in the RFP).
c	(i) Integration Experience  (ii) Turnkey Projects Experience	(i) Cases involving Integration – Where product involves integration, previous experience of not less than one year/ one project in integration of systems/ equipment shall be required.  (ii) Turnkey Projects – Experience of successful completion of one Turnkey project of similar nature within last 05 Years with value of at least 20% of AoN cost or currently executing a contract of similar nature with value of at least 30% of the AoN cost. In case of no experience in turnkey projects the vendor for main component of the turnkey project may be selected if it has experience as per Srl 2(b) above and experience of installation or integration of similar equipment/ system or system of systems.
d	Quality control	For ICT Cases – (i) Certification to be included if linked to scope of work – Gartner Quadrant/ ISO9001/ CMMi3 or more (specifying development/ service/ acquisition models) / ISO 27001. For Information Security and large value projects preferably CMMi5 may be specified.  (ii) Compliance with IEEE/ ITU standards depending upon nature/type of project or solution required.
3	<b>Others</b>	
a	Industrial License	Posses or be in the process of acquiring a license, if the product under project requires license as per DIPP licensing policy.
b	Registration	Registered for Min 02 Years, 01 years for MSMEs.  Min no of years not applicable for JVs constituted specifically for a project.



**Appendix L**  
(Refers to Para 42 of RFP)

**GUIDELINES FOR SUBMISSION OF DRAFT ATP**

**General**

1. The details of AHSPs are as follows:-
  - (a) Weapon System : CQA(W), Jabalpur (Nodal AHSP for weapon).
  - (b) Ammunition : CQA(A), Pune (Nodal AHSP for ammunition).
  - (c) FCS : CQA(R), Bengaluru (Sub AHSP).
  - (d) Instruments : CQA(I), Dehradun (Sub AHSP).
  - (e) Electronics : CQA(L), Bengaluru (Sub AHSP).
2. Vendor will submit draft ATP (including sub system / system level ATP) alongwith technical Bid or atleast one month before commencement of FET. The same will be finalised by QA Agency with vendor alongwith SHQ. The ATP should contain following details:-
  - (a) Inspection Criteria: 100% or Sampling basis.
  - (b) If sampling Basis, then sample size/ lot size, sampling plan (Single/ Double), Normal/ Tighten inspection, AQL%, etc.
  - (c) Test parameters: Visual, Gauging and direct measurement, Static/ Functioning tests, Dynamic firing etc.
  - (d) Defect Classification list.
  - (e) Acceptance/ Rejection Criteria.
3. Mutually agreed ATP will clearly spell out about every test to be carried out during PDI/JRI. There will be no duplication of evaluation in PDI and JRI.
4. Mutually agreed ATP will be part of contract. QA agency will ensure to carry out only necessary tests during PDI/JRI instead of evaluation of every parameter. If PDI/JRI are planned to be conducted by authorized Third Party Inspection (TPI) agencies, the same will be clearly spelt out in the QA instructions and the details to be included in the mutually agreed finalised ATP.
5. QA of equipment will be carried out as per finalised ATP included in the contract. Vendor will arrange for requisite test facilities at OEM premises/accredited laboratories for QA agency. Details of the same will be included in ATP.
6. Armament stores will undergo static and dynamic test during PDI / JRI. Selected vendor will arrange for the requisite test at OEM premises / accredited laboratories. The same will be intimated to vendor during finalisation of ATP.

7. AHSP should have the right to amend ATPs by mutual agreement with OEM at later stage on occurrence of defects during exploitation of equipment.
8. Pre Dispatch Inspection (PDI) would be at the discretion of the buyer. In addition JRI may also be carried out. JRI should include functional checks of critical parts, visual checks alongwith quantitative checks.
9. The reference/ supporting documents i.e. Technical specifications/ drawings, Range Table, UHB, EFC Value for each type of Ammunition, Type of Barrel, Caliber, Length and Weight of barrel, Plating, Chamber capacity, Chamber elongation measurement procedure, Barrel temperature sensor, Method and gauges for checking straightness of bore and dias, Rate of fire, Muzzle velocity, Recoil length, Recoil time and Recoil force, Type of rifling and No of grooves (if rifled bore), chamber pressure, maximum range and elevation and traversing limits, Expected barrel life, EFC value for different types of ammunition, Wear at C of R, Method of cleaning of bore after firing, Type of Recoil system, Breech Mechanism and Firing mechanism, Strength proof criteria (P1 and P2 pressures) and strength proof reports of Ordnance, Barrel changing and barrel cooling mechanism/ procedure, Technical Manual, standards which have been used for formulation of ATP and may any other relevant documents are essentially required/ to be submitted by the vendor.
10. **Test Instruments/ Accessories required.** Test Instruments/ Accessories required for conduct of ATP be mentioned along with Part number, Make/ Model etc.
11. **Qualification/ Environmental Tests.** Applicable class from relevant JSS, as per RFP for Environmental testing be mentioned along with test severities and procedures to be followed for the conduct of the test. Pre, In-situ and Post Performance tests to check the performance of the equipment be included.
12. **Acceptance/ Performance Tests.** Includes the Visual, Electrical and Functional tests. Functional Test procedure along with diagram showing Test set up to be mentioned. Final acceptance/ Performance checks comes under this section.
13. **Applicability of ESS/ Endurance Test.** ESS procedure to be followed be mentioned and the procedure for carrying out the Endurance test be included.
14. **Quality Audit points/ Checks/ Methodology including Real Time/ Online Audit activities and list of critical process.** Process audit methodology to be carried be mentioned.
15. **Quality Audit Flow Chart/ Process Monitor Points.** Mutually agreed Audit flow chart be mentioned by quoting Relevant ISO standards.
16. **Operational Checks/ Tests.** Includes quick checks/ test with ATE/ BITE/ Processor Based Auto diagnostic checks on the store, if equipped with, before release of the store to the Consignee. Tests for all functional, operational and test specification/ parameters should be designed and included in ATP as per relevant specifications like JSS5555/ CQAL-640B for Generator sets and Battery specifications for maintenance free batteries/ CQAL-637D for Lead Acid Batteries or latest (Severity as per project requirement).
17. **Test and Measurement Record (TMR).** TMR Sheet with expected output be mentioned.

18. **Acceptance criteria including Sampling Plan, if any.** Acceptance criteria be mentioned under this section.

19. The following tests will be carried out during Acceptance Tests:-

(a) **Strength test (Barrel Proof).**

Rds	Quantity	Parameters to be checked
Warmer	01	MV
P1 (15% more of Service Pressure)	01	Pressure
P2 (20% more of Service Pressure)	01	Pressure
Stress relieving Rd	01	MV
Total	04	

Note: If vendor/ OEM will carries strength Proof test of all the barrels covered under the contract at their end and provide test certificate along with result/ report of all barrels, then strength proof test will not be repeated/ required during acceptance test. Vendor to provide copy of Defence Standard/National /International Specification followed for proof firing alongwith specified values of various parameters and their acceptance criteria.

(b) **Automaticity Proof.**

Ser No	Mode of Firing	Details	No of Rds
(i)	Manual Mode	01 effective engagement cycle (07 Rds or more)	07 or more
(ii)	Auto mode	05 effective engagement cycles (05 x 07 Rds or more)	35 or more
Total			42 or more

Note: MV, Pressure, Rate of fire, Recoil Length, Engagement of ground target up to 2000m or more, Effective engagement (one engagement cycle of 7 Rds or more for min 2 Sec) without reloading of Gun and Trouble free operation of the Gun will be ascertained/ checked/ tested.

(c) If provision of Spare Barrel exists in the equipment, then strength proof test and accuracy proof will also be applicable to Spare Barrel. (Total No of rounds required: 4+10=14).

(d) **Accuracy Proof.**

(i) Based on the Weapon caliber, Vendor to provide detailed procedure for accuracy proof i.e. Acceptance criteria, type and size of target, distance of

target Range requirement (Open/ Close range), Type, Conditioning and quality of Ammunition and any other additional conditions etc.

(ii) As per OEM document of 40mm L-70 Gun, Dispersion test carried out to check the accuracy by firing 10 rounds at the target distance of 600 meter.  
**(Total No of Rounds required : 10).**

(e) Since Nature of equipment is multi-disciplinary, therefore all concerned AsHSP/ QA agency will carry out proof as per their AHSP responsibility and will project the requirement of ammunition thereof for acceptance of equipment.

(f) Complete contract quantity of equipment will be evaluated as per above paragraph for acceptance during PDI/ JRI.

(g) **Summary of Rds.**

(i) No of Rounds required for proof : 91 or more.

(ii) No of Rounds required for Re-proof (if required) : 91 or more.

(iii) Additional Reserve Amn (10%) : 10 or more.

Total (for 01 Gun) : 192 or more.

**Note :**

(i) The type of ammunition to be used for validation of FoPM will be finalized during finalisation of ATP.

(ii) The No of rounds have been calculated on basis of one engagement cycle of 07 rounds. If No of rounds of engagement cycle have changed, total No of rounds will be changed accordingly.

20. **Guidelines for framing draft ATP for Electronics/ Electrical sub-systems.** Draft Acceptance Test Procedure for the Equipment/ System should mainly consist of the following:-

(a) **Scope and introduction.** Includes the scope, introduction and purpose of the document and general information about the equipment.

(b) **Brief description of the Equipment/ System.** Brief description of the equipment/ system be highlighted indicating the salient features, Equipment/ System configuration, interfaces involved and its compatibility and role in the main system where it is intended to be used.

(c) Safety/ Security aspects, if any.

(d) **Technical Specifications.** TS of the equipment be indicated along with dimension, weight of the equipment etc. Operational requirements and Pictorial representation of the equipment/ system be provided under this section.

(e) Reference documents including list of drawing, related Standards, Specifications etc includes Reference documents/ drawings of the equipment, Standards/ Specifications up to which the equipment/ system is complied.

(f) **Bill of Materials.** Bill of Materials as e the following format be included:-

S No	Item Name/ Description	Part Number	NSN Details	Drawing Number	Manuf-acturer	Schematic Reference	Standard of Reference	Qty Nos	Mil Industrial/ Commercial

### **Guidelines for Framing of ATP for Ammunition**

21. Vendor/ OEM should formulate ATP based on their technical specification being followed during production.

22. List of type of tests to be conducted to evaluate the Parameters related to safety, reliability, functioning and consistency aspects (viz., static and Dynamic tests). In general, the following basic Test Parameters are recommended to be included in draft ATP:-

- (a) **Environmental Test** (includes Visual and Dimensional/ Gauging, Impact (vertical) test, Bounce Test/ Transport Simulation, Vibration Test and Hermetic Sealing Test for Package of Pressure tightness Test) as per specification JSG 0102/MIL standards.
- (b) **Muzzle Velocity.**
- (c) **Pressure.**
- (d) **Consistency.**
- (e) **Range.**
- (f) **Non-Arming distance of Fuze** (for both percussion type Fuze and electronic fuze).
- (g) **Arming distance of Fuze** (for both percussion type Fuze and electronic fuze).
- (h) **Piercing effect on Armour plate.**
- (j) **Proximity distance/ range** for electronic fuze.
- (k) **Tracer visibility timing.**
- (l) **Self destruction time of fuze.**
- (m) **Rate o fire.**
- (n) Any other test as per the documentation of the OEM.

23. Testing methodology for each and every test parameters is to be provided by the vendor.

24. All infrastructure, test equipments, 02 weapons, Ballistic Barrel (if required), gauges, Standard round, Measurement instruments, jigs/ fixtures, targets and other accessories, duly calibrated, to be provided by the vendors for conduct of PDI/ JRI at their own cost.

OR

DGQA technical evaluation will be conducted as per available infrastructure, Facilities conditions, Testing/ Measurement Methodology, Equipment and Service weapon available in Indian Proof Ranges and Testing Laboratories. OEM will have to accept these and all results thereof.

25. **Sampling Inspection Procedure.**

(a) Sampling will be done generally in accordance with IS 2500: Pt-I (ISO 2859-I). Based on which the following sampling plan will be adopted depending upon lot size and AQL. Vendor needs to define production lot size of ammunition. Components/ Sub-assemblies going into the formation of single lot of end product should be homogenous as per laid down standards.

(b) Each and every parameter referred at Para 22 above will be evaluated.

(c) Samples expended in firing should be supplied in excess to the contracted quantity/ deliverables i.e. lot size + samples.

An illustration of sampling plan is given below:-

(i) **Visual, Dimensional/ gauging Inspection:-**

General inspection Level-II, Single sampling, Normal Inspection  
 Lot Size (indicative): 3201 to 10,000 Nos.  
 Sample Size: 200 Nos.  
 (For example)

DCL*	AQL	Accept No	Reject No
Critical Defect	0	0	1
Major Defect	0.65	3	4
Minor Defect	1.5	7	8

**Note:-** List of Defects (Critical, Major and Minor) for all test Parameters to be provided by the vendor.

(ii) **Static and Dynamic Proof:-**

Special Inspection Level S-3, Double sampling, Normal Inspection.

**Illustration**

Lot Size (indicative): 3201 to 10,000 Nos.

Sample Size: As given below.  
(For example)

DCL	AQL	Sample Size	Accept No	Reject No
Critical Defect	0	20	0	1
Major Defect	0.65	50	0	2
		100	1	2
Minor Defect	1.5	20	0	2
		40	1	2

26. Vendor has to define the lot size, Defect Classification List and AQL (for every parameter of each type of ammunition). Number of samples for OT lot acceptance will be dependent on lot size as per IS 2500: Pt I (ISO 2859). Tentative requirement of ammunition for destructive testing as per indicative reference in Para above be used by vendor for submission of bids. The ammunition used for dynamic testing will be over and above ammunition to be delivered.

27. Since Nature of equipment is multi-disciplinary, therefore all concerned AsHSP/ QA Agency will scrutinize the draft ATP and vet the portion of their responsibility. The consolidated ATP will be finalized in mutual agreement with Vendor.

#### **Guidelines for Framing of ATP for Fire Control System (FCS)**

28. ATP for Electronic Subsystems in r/o FCS shall be prepared/ included as follows:-

- (a) Visual / Physical checks including dimensions (in LXBXH) and Weight of the subsystem / system.
- (b) All Technical and Critical parameters as mentioned in the RFP / Design Specifications of sub-systems should be checked / measured in the form of electrical parameters.
- (c) In case of sub-system level / system level check, all the technical and critical parameters as mentioned in the Design Specification / RFP to be checked / verified and the same may be included in the sub-system / system level ATPs accordingly.
- (d) Specified / acceptable values of parameters should be mentioned against each step of checks in ATPs wherever applicable against which measured values can be entered during electrical checks after each stage of testing as follows:-

**ACCEPTANCE TEST PROCEDURE**

Name of Vendor:

Nomenclature of sub-system / system:

Name of Test:

Date:

Ser No	Test / check parameters	Specified value	Measured Value	Conformance (C)/ Non Conformance (NC)	Remarks

Signature



**Appendix M**  
(Refers to Para 54 of RFP)

**DOCUMENTS TO BE SUBMITTED BY THE BIDDER ALONG WITH THEIR TECHNO-COMMERCIAL PROPOSALS**

The list of documents which needs to be mandatorily submitted by the Bidders as part of Technical Proposal are placed below. Non-submission of the documents may result in disqualification of the Bidder from the bidding process.

<b>Ser</b>	<b>Reference</b>	<b>Document Description</b>
1	Para 5 of RFP	Declaration by Bidder : Debarment of vendors
2	Para 6 of RFP	Certificate of Compliance to Para 20, Chapter I of DAP 2020
3	Para 17 of RFP	Declaration by Bidder: Government Regulation
4	Para 18 of RFP	Declaration by Bidder: Obligations Relevant to Transfer of Conventional Arms
5	Para 19 of RFP	Declaration by Bidder : Patent Rights
6	Para 22 of RFP	Declaration by Bidder : Fall Clause
7	Para 29 of RFP	Technical document covering performance parameters.
8	Appendix B	Compliance Table
9	Appendix C	Warranty Clause
10	Appendix D	CERTIFICATE: Malicious Code
11	Annexure I to Appendix E	Manufacturer's Recommended List of Spares (MRLS)
12	Annexure II to Appendix E	List of SMT/STEs, Jigs, Fixture and Infrastructure
13	Annexure III to Appendix E	Technical Literature
14	Annexure IV to Appendix E	Training Aggregates
15	Appendix H	Price Bid
16	Annexure I to Appendix J	Pre-Contract Integrity Pact
17	Annexure I to Appendix J	IPBG

**Appendix N****GLOSSARY**

AMC	Annual Maintenance Contract
AoN	Acceptance of Necessity
ATP	Acceptance Test Procedure
CAMC	Comprehensive Annual Maintenance Contract
CKD	Completely Knocked Down
CNC	Contract Negotiation Committee
DAC	Defence Acquisition Council
DGAQA	Director General of Aeronautical Quality Assurance
DGNAI	Director General Naval Armament Inspectorate
DGQA	Director General of Quality Assurance
DPB	Defence Procurement Board
DAP	Defence Acquisition Procedure
DRDO	Defence Research and Development Organisation
EMC	Electro Magnetic Compatibility
EMI	Electro Magnetic Interference
EPP	Enhanced Performance Parameters
ESP	Engineering Support Package
FET	Field Evaluation Trials
Gol	Government of India
IC	Indigenous Content
ICG	Indian Coast Guard
IDDM	Indigenously Designed & Developed Manufactured
IM	Indigenously Manufactured
IP	Integrity Pact
IPBG	Integrity Pact Bank Guarantee
LRU	Line Replaceable Unit
MET	Maintainability Evaluation Trial

MoD	Ministry of Defence
MRLS	Manufacturer Recommended List of Spares
M-ToT	Maintenance Transfer of Technology
NCNC	No Cost No Commitment
OEM	Original Equipment Manufacturer
OTE	Open Tender Enquiry
PA	Production Agency
PCIP	Pre Contract Integrity Pact
QA	Quality Assurance
RFP	Request for Proposal
SPB	Services Procurement Board.
SHQ	Service Headquarters
SKD	Semi Knocked Down
SRU	Shop Replaceable Unit
TEC	Technical Evaluation Committee
ToT	Transfer of Technology