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500026/TM(LS/AAD)

29 Dec 2022

(Vendor Concerned)

**CLARIFICATION ON PRE-BID QUERIES : QUANTITY 220 AIR DEFENCE GUNS (SUCCESSOR TO L-70 AND ZU 23-MM-2B GUNS) AND 1,41,576 ROUNDS OF AMMUNITION (1,04,136 ROUNDS OF STANDARD AMMUNITION AND 37,440 ROUNDS OF ADVANCED AMMUNITION) UNDER BUY & MAKE (INDIAN) CATEGORY**

Dear Sir/Madam,

1. Reference is made to Request for Technical and Commercial Proposal for procurement of **Quantity 220 Air Defence Guns (Successor to L-70 And Zu 23-mm-2B Guns) and 1,41,576 rounds of ammunition (1,04,136 rounds of standard ammunition and 37,440 rounds of advanced ammunition)** under Buy & Make (Indian) Category issued vide this office letter No 75961/GS/CD/AD Guns & Amn/RFP dated 07 Oct 2022 and your queries thereof.
2. Clarifications on queries raised during pre-bid meeting held on 18 Nov 2022 are attached as **Appendix**.
3. For your info and necessary action please.



Yours faithfully,

*SK Patnaik*

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

**Enclosure:** As above.

**PRE – BID QUERIES: PROC OF AIR DEF GUN & AMN**

<b><u>Ser No</u></b>	<b><u>Queries of Vendors</u></b>	<b><u>Ref to RFP By Vendor</u></b>	<b><u>Proposed Response</u></b>
<b><u>M/s Adani Defence and Aerospace</u></b>			
1.	(a) What technical data will be provided with respect to the in-service Radars and by when? While the integration and interfacing has to be undertaken with radars at a later stage, we need to have adequate technical details on the in-service radars to do analysis.	Para 8 (b) of Annexure I to Appendix F	(a) Vendors to confirm feasibility of Integration of Gun with Radar at TEC stage.
	(b) Provision of handing over target from radar to EOFCS can be ascertained only after analysing the in service radars. Can in service radars be accessed by vendors with their technical literature? Kindly facilitate.		L1 vendor will be given access to all in service radars
	(c) During firing at demonstration stage subsequently from 'in service' fire control radar, is the gun required to be unmanned. Please confirm		As per RFP
2.	<b><u>Automatic Loading.</u></b> More clarity is required in ammunition loading. Between para 15(a) and (b) and (d), please clarify. In our understanding, automatic loading implies that all ammunition placed/stowed on the gun platform should be able to be fired after one initial manual loading and no further manual intervention is permitted till the entire ammunition necessary for five engagements on the gun is exhausted.	Para 15 of Annexure I to Appendix F	<p>- Details of ammunition system have been adequately specified at Para 15 (a) to (f) of Annexure I to Appendix F of RFP (Detailed Trial Methodology).</p> <p>- Automatic ammunition loading implies automatic loading of subsequent rounds (without manual intervention) in the feeding system of the gun after initial loading</p> <p>- It is confirmed that no manual intervention is permitted for less than 35 rounds.</p>

3.	<p><b><u>Aerial target systems.</u></b>  (a) How will the user standardize use of aerial targets (MDI/DMDI) i.e minimum physical size, RCS, speed, altitude etc which are to be supplied by vendor for firing trials ? Will there be parameters listed by user or approved list of air targets given by user? Please specify suitable number of targets.</p> <p>(b) We suggest that Buyer provides and operates the target system for all vendors during trials</p>	Para 2(c) of Appendix F	<ul style="list-style-type: none"> <li>- Will be clarified in Pre Trial Meeting</li> <li>- Target Systems with same technical specification / capability will be used for trials for all vendors.</li> <li>- The gun is required to match the speed as mentioned at Para 10to Annexure I of Appendix F of RFP. Aerial Target will not exceed the speed of 500m/s.</li> </ul> <p>Suggestion with reference to Trial methodology may be forwarded by all vendors. All suggestions received will be examined &amp; implemented if accordance with Para 3 of Appendix F of RFP</p>
4.	From this RFP it appears that the Life Cycle Support Contract has been completely removed. Please confirm that vendor does not have to offer such LCSC	Appendix E	Confirmed
5.	Kindly specify in-service prime mover since we have reached pre-bid stage	Para 2(b) of Annexure I to Appendix F	<ul style="list-style-type: none"> <li>(a) ALSS 6x6 / TATA 6x6.</li> <li>(b) Access to the Prime Mover will be granted post TEC</li> </ul>
6.	Kindly specify how many separate firing restriction zones(Taboo arc) are desired within the overall angular travel of the gun?	Para 17 of Annexure I to Appendix F	As per RFP
7.	<p><b><u>Hit Probability.</u></b>  (a) Hit probability of 0.6 in one effective engagement (seven rounds fired on a single target) using EOFCS at 70% of effective range. Greater clarity is requested on the methodology of hit probability calculation.</p> <p>(b) Define a 'hit'. Since each advanced ammunition round would explode in vicinity of the target, multiple splinters and shrapnel would impact the target. Within seven rounds in a effective engagement, it may not be possible to calculate 0.6 hit probability even if MDI is used unless single shot engagement is undertaken</p>	Para 19 of Annexure I to Appendix F	<ul style="list-style-type: none"> <li>(a) Guns are required to achieve 60 % hit (3 out of 5) at 70% of maximum range given in the RFP using EOFCS.</li> <li>(b) <b><u>Hit</u></b> – Direct Hit/ damage to the target.</li> <li>(c) As per Para 3 of Appx F of RFP, vendors can forward suggestions with reference to trial methodology.</li> <li>(d) The detailed methodology will be clarified during Pre-Trial Meeting to TEC compliant vendors.</li> </ul>

8.	<b>Battery bank.</b> Does the weight of the gun include the battery bank weight and exclude the APU ? Does the battery bank specified in RFP mandatorily have to be permanently fitted on the platform/superstructure? Unlike an electric vehicle battery bank, these batteries will have to be placed in very close proximity of ammunition/oils etc in field conditions increasing fire hazard. There is likely to be a quantum increase in weight of the gun given the desired backup time desired. Can the battery bank and its APU be displaced from the gun platform?	Not Referred	As per Para 5 of Appendix A of RFP, Weight of the gun should not be more than 7 Tons+ 10% in travelling position (excluding auxiliary power unit i.e. generators)”
9.	<b>IC Content</b> - Whether Indigenous Content (IC) is to be measured collectively for both AD Gun and Ammunition or separately for gun and separately for ammunition?	Not Referred	IC content is over the complete contract
10.	How much quantities of Standard Ammunition and Advanced Ammunition are estimated for Field Trials? Kindly specify each.	Not Referred	As per Para 2 (b) of Appendix F to RFP
11.	Whether the AD Gun fielded in trials be included under Qty 220 Nos?	Not Referred	As per RFP (Refer to Para 8 of Part-I of RFP) AD Gun fielded in trials will not be included under Qty 220 Nos
12.	Barrel change specifications are not laid out in the RFP. What is the desired number of rounds to be fired before barrel change is required to undertaken?	Not Referred	Barrel change specification are as per vendor solution and refer Para 18(c) of Appendix A of RFP
13.	Will the ammunition required for test of the AD guns during PDI/ JRI will be drawn from the ammunition supplied as part of deliverables of the RFP?	Not Referred	The ammunition required for test of AD Guns during PDI will be over & above the deliverables. As per Para 42 of Part-II & Para 24 of Appendix L of RFP.
14.	Is there any requirement of provisioning manual/automatic selection of ammunition type (standard / smart) during a firing engagement?	Not Referred	As per RFP& it depends upon the vendor solution

15.	It is requested to specify the expected time between completion of TEC and start of FET. A realistic timeframe between clearance of TEC and start of FET must be given in which the participants can manufacture/assemble/integrate a fully compliant solution, carry out internal validation and make required improvements, if any prior to commencement of trial	Not Referred	The timelines of the RFP are as per DAP. Appendix 'L' to schedule I of Chapter II which gives the broad timelines
16.	Please specify expected DRI ranges for EOFCS, expected resolution and imagery refresh rate for sensor and imaging system and LRF resolution	Not Referred	EOFCS should allow the effective engagement of target at maximum range of the Gun. As per RFP
17.	In view of the complexity of the proposal with critical ammunition now being part of 'Make' category and the prevalent travel restrictions due to COVID-19, we request for an extension of 8 weeks to submit the RFP response	Not Referred	Beyond scope of Pre-Bid Meeting Case to be taken up separately

**M/s TATA Advanced Sty Ltd**

1.	AO 8/93 and SAO 2/S/2006/MGO are not available with the vendors. Relevant extracts may please be provided to the vendors	<p>Para 13 (a) / Page 8. Product Support</p> <p>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 last lot being delivered. 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 (DGQA) till the equipment is in service. RCA (Root Cause Analysis) of defect / accident to be carried out by Vendor in consultation with the AHSP(DGQA). The vendor shall provide comprehensive Defect Investigation Methodology. Vendor shall provide comprehensive Defect Investigation Team with AHSP(DGQA) member in the 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 AO 8/93 and also SAO 2/S/2006/MGO.</p>	Will be provided at CNC stage to the L1 vendor
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2.	It is assumed that the radar interface data will be provided to the vendors. The location and duration for which in-service radars will be provided to the vendors for integration checks and internal firing may please be provided.	Appx 'A' Para 8 (b) / Page 23 Technical Parameters	Radar details will be provided post submission of Eqpt for Trials
3.	The method of calculation of Hit Probability of 0.6 and evaluation criteria may please be elaborated.	Para 19 of Appx 'A' / Page 25 Hit Probability	Details covered at Para 1 of Page 1 & detailed methodology to be specified during Pre Trial Meeting
4.	Please provide specifications of suitable target systems and approximate quantities required for NCNC trials. It has commercial implications for the vendors considering the high costs of the target systems	Para 2 (c) of Appx 'F' / Page 46 Target System	<p>(a) All details wrt target will be specified during Pre Trial Meeting.</p> <p>(b) The broad tech specification of in service target system are as under :-</p> <p style="padding-left: 40px;">(i) <u>BPTA</u>. Clean : 80 m/s &amp; Tow : 60 m/s.</p> <p style="padding-left: 40px;">(ii) <u>MEAT</u>. 135 m/s</p> <p style="padding-left: 40px;">(iii) <u>Jet 80</u>. 180 m/s</p> <p>(c) Each vendor to cater for 07 targets (minimum) including spare.</p>
5.	The ammunition requirement is mentioned as indicative. Considering spare barrel for each gun, can the vendors assume 28 rounds for strength test (Barrel Proof), 35 rounds per gun for Automacity Proof and 10 rounds per gun for Accuracy Proof. The total ammunition for ATP thus works out to (6160 + 7700 + 2200 = 16,060 rounds). Please confirm. You are also requested to clarify that the rounds for ATP will be from the total ammunition being procured or are these rounds are to be catered for by the vendors.	Para 19 of Appx 'L' / Page 98 Tests to be carried out during acceptance trials	<p>(a) No of rounds / gun to be decided at ATP formulation stage once the technical documents are submitted by vendor.</p> <p>(b) The ammunition required for ATP will be over and above the deliverables</p>

6.	As per Ministry of Finance Notification No. 1/4/2022-PPD dated 05 Aug 2022 (Copy enclosed for ready reference), it is indicated that Bank Guarantees in the form of Electronic Bank Guarantees (e-BG) can be provided by vendors. Request to confirm if we can provide Bank Guarantees in the form of e-BG	Para 1.3.3 / Page 59 of Appendix G  Bank Guarantees	It has been decided that in respect of Capital Acquisition Cases, Bid Security : Earnest Money Deposit, Performance-cum-Warranty Bank Guarantee (PWBG) and Performance Bank Guarantee (PBG) may also accepted in the form of electronic Bank Guarantee (e-BG) from any Indian Public or Private Scheduled Commercial Bank (as notified by RBI)
7.	As per Para 1.4.2, 60% of payment will be released on submission of proof of delivery. While as per Para 2 (b) (i) 60% payment will be released on pro rata basis.  Request to confirm that the 60% payment will be made on pro rata basis	Para 1.4.2 / Page 60 of Appendix G & Annexure V to Appendix G / Page 71 Payment Terms	The 60% stage payment shall be paid on pro-rata basis upon submission of proof of dispatch & other relevant documents
8.	As per Para 2 (c) (viii) 35% Payment will be released on delivery of MRLS. Request to clarify this payment schedule as it is not clear.	Para 1.4.2 / Page 60 of Appendix G & Annexure V to Appendix G / Page 71 Payment Terms	<b>This is a Typo Error in RFP &amp; needs to be suitable amended as under :-</b>  (a) <u>Para 2 (c) (viii) to Appx G of RFP</u> :For 35% read 80%.  (b) <u>Para 2 (c) (vii) to Appx G of RFP</u> : The stage payment should be 80% and not 85%.
9.	20% Payment will be released after completion of JRI. Request MoD to confirm the JRI timelines after delivery as significant payment is linked to completion of JRI	As per Para 2 (c) (viii) 35% Payment will be released on delivery of MRLS. Request to clarify this payment schedule as it is not clear.  Payment Terms	The timelines of JRI are dependent on both Buyer & Seller. JRI will be deemed complete only after rectification of observations. Specific timelines can therefore not be mentioned at this stage. The same can be mutually discussed at CNC stage



10.	As per Ministry of Finance Notification No. 41/2022-Customs dated 13 Jul 2022 (Copy enclosed for ready reference), it is indicated that Customs Duty exemption will also be provided to private entities. In view of above, we request MoD to confirm if Customs Duty Exemption Certificate will be provided for the subject RFP.	Para 1.4.8 / Page 50 of Appendix H Payment of Taxes and Duties	CDEC will be provided in accordance with existing govt guidelines only (DoE Notification No 19/2019)
11.	Para 8 (e) of Annexure I to Appendix J, EMD BG shall be valid for 18 months or signing of contract, whichever is later. However, as per EMD BG format, EMD BG shall be valid for 45 days beyond 18 months / contract signing whichever is later. Kindly confirm validity of the EMD BG	Para 8 (e) of Annexure I to Appendix J / EMD BG Format EMD BG Validity	Para 8 (e) of Annexure I to Appendix J/ EMD BG Format to be ref

**M/s L&T**

1.	<p>As per Note (a) at Annexure I to Appendix B to Chapter I of DAP 2020 states that:</p> <p>Base Exchange Rate will be Selling Rate of Parliament Street Branch of State Bank of India, New Delhi as on the last date of submission of bid.</p> <p>Kindly confirm that Base Exchange Rate will be TT Selling Rate of Parliament Street Branch of State Bank of India, New Delhi as on the last date of submission of main technical bid and first commercial bid.</p>	Part-I, Para 7 Indigenous Content	Ref Para 1 (b) (iv) of Annexure I to Appendix G of RFP.  (BC Selling Rate)
2.	<p>Please confirm that the date of installation and commissioning will be the date of commencement of warranty only in case of Special Test Equipment and for all other deliverables, the commencement of warranty will be from that date of acceptance post JRI.</p> <p>Please confirm that the warranty will cover only the manufacturing defects where the product has been used by the trained manpower as per the standard operating procedures.</p>	Part-I, Para 11  <b><u>Warranty.</u></b> The deliverables supplied shall carry a comprehensive warranty on pro rata basis, to include spares for which warranty claims are initiated, for 24 months. Such spares will be provided free of cost. No spares will be drawn during the warranty period from the MRLS. The commencement of warranty will be from the date of acceptance post JRI or installation and commissioning, whichever is later.	- No deviation from RFP

3.	Please confirm that the vendor is required to provide Defect Investigation Team only during warranty period. Any assistance in Defect Investigation after warranty period shall be at a cost to be mutually agreed between Buyer and Bidder	Part-I, Para 13(a) Product Support ...  Vendor shall provide comprehensive Defect Investigation Team with AHSP(DGQA) member in the 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	To be deliberated during CNC
4.	Kindly provide a copy of AO 8/93 and also SAO 2/S/2006/MGO.	Part-I, Para 13(a) Product Support  Defect investigation will be in accordance with AO 8/93 and also SAO 2/S/2006/MGO	To be provided during CNC stage to the L1 vendor
5.	Kindly confirm that deliverables such as the main Weapon System, SMTs/STE and Training Aggregates shall be allowed to be utilised for conduct of training	Part-I, Para 15 Training of Crew and Maintenance Personnel  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.	Confirmed, without impacting the delivery schedule as given in Annexure 5 to Appendix G of RFP

6.	<p>Since the complete ESP including MRLS list provided by the Bidder is vetted and also thoroughly checked and modified (items added/deleted, quantities added/reduced) as part of MET of the NCNC evaluation, the Buy Back and Sufficiency clauses are redundant and not applicable in RFP, please confirm</p>	<p>Part-II, Para 37</p> <p>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</p>	<p>MRLS will be recommended by OEM. During MET, EME representatives will guide, suggest or assist OEM based on their experience. However, final list of MRLS will be provided by OEM. The Adequacy &amp; Buy Back clause is applicable as per RFP. Further, level of repairs is well explained in the RFP Para 3 of Appendix E and as per envisaged repair level and number of repair point, OEM to suggest list and quantity of MRLS in multiples of repair point.</p>
7.	<p>Please confirm that the User Trials will be conducted in summer in plains/ desert and certification for HAA deployment is acceptable</p>	<p>Part – II. Para 40(a) User Trials</p>	<p>Trials in HAA will be conducted, Ref Para 8 of Appendix F (Trial Methodology) of RFP</p>

8.	<p>QA responsibility during production should be with the vendor. Necessary proof will be shown to DGQA inspectors during Integrated Functional Check (IFC) ATP of the equipment during PDI. Therefore, QA plan need not be part of the contract. Therefore, request that the quoted part of the para be removed.</p>	<p>Part – II, Para 42 Quality Assurance Instructions and Technical Evaluation Plan</p> <p>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</p>	<p>As per RFP</p> <p>To be discussed during CNC</p>
9.	<p>Request provides the maximum allowable Turning Circle Diameter for the AD Gun.</p>	<p>Appendix A, Para 2 (a)</p> <p>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</p>	<p>No deviation from para 2 of Appendix A of RFP</p>

10.	Kindly provide allowable transport dimensions of AD Guns in in-service aircraft and ships in terms of L x B x H?	Appendix A, Para 2 (c ) Capable of being transported by 'in service' aircraft and ships	<p>(a) As per Para 2(c) and Para 3 of Appendix A of the RFP</p> <p>(b) It is clarified that the gun should meet the ODC requirements as specified at Para 3 of Appendix A of RFP.</p> <p>(c)The allowable transport dimensions of 'in service aircraft' are as under:-</p> <ul style="list-style-type: none"> <li>(i) Length : 20m</li> <li>(ii) Breadth : 3.3m</li> <li>(iii) Height : 3.4 m</li> </ul>
11.	Kindly provide permissible dimensions of the equipment in L x B x H ?	Appendix A, Para 3 <b>Transportability.</b> Rail transportability on broad gauge with ODC, if applicable.	<p>(a) As per Para 2(c) and Para 3 of Appendix A of the RFP</p> <p>(b) It is clarified that the gun should meet the ODC requirements as specified at Para 3 of Appendix A of RFP.</p> <p>(c) The allowable transport dimensions of in service aircraft are as under:-</p> <ul style="list-style-type: none"> <li>(i) Length : 20m</li> <li>(ii) Breadth : 3.3m</li> <li>(iii) Height : 3.4 m</li> </ul>

12.	We request that instead of "particular equipment / goods" "particular assembly/component" be incorporated.	<p>Appendix C, Para 6 Warranty Clause</p> <p>If a particular equipment/ goods fails frequently and/ or, the cumulative downtime 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 60 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</p>	Any assembly / component failing will causes the complete eqpt to fail – As per RFP
13.	Since ESP including MRLS is vetted and evaluated during MET as part of NCNC trials, the sufficiency and buy-back clauses after MET should not be applied. Kindly confirm.	<p>Appendix E, Para 3(a) MRLS</p> <p>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 :-</p>	MRLS will be recommended by OEM. During MET, EME representatives will guide, suggest or assist OEM based on their experience. However, final list of MRLS will be provided by OEM. The Adequacy & Buy Back clause is applicable as per RFP. Further, level of repairs is well explained in the RFP Para 3 of Appendix E and as per envisaged repair level and number of repair point, OEM to suggest list and quantity of MRLS in multiples of repair point.
14.	Since SMTs/STE are vetted and also physically evaluated during MET as part of NCNC trials, the adequacy clause after MET should not be applied. Kindly confirm.	<p>Appendix E, Para 4 SMT/STEs</p> <p>The list of equipment required to be supplied will incorporate Adequacy Clause, as elaborated above</p>	During MET, EME representatives will guide, suggest or assist OEM based on their experience. However, final list of SMT/STE will be provided by OEM. Thus Adequacy & Buy Back clause is applicable as per RFP
15.	Complete Equipment Schedule (CES) as given by Bidder should be accepted. Addition of items desired by DGQA thereafter (often a large no.), if any, and subsequent internal approvals may be undertaken by DGQA internally. Kindly confirm.	<p>Appendix E, Para 5(b) (viii)</p> <p>Complete Equipment Schedule</p>	Confirmed

16.	Kindly clarify how TOTE and carried spares are different from Complete Equipment Schedule (CES). It is seen in the past that CCES is prepared covering all tools, equipment and spares. Therefore, it is felt that TOTE is duplication and hence be deleted.	Appendix E, Para 5(b) (ix)  Table of Tools & Equipment (TOTE) & carried spares	As per RFP
17	Rotable list as provided by Bidder be accepted. Alternatively, Buyer may please provide a list of generic item/assemblies relevant to the current RFP so that Bidders can prepare the norms of consumption etc.	Appendix E, Para 5(b) (x)  Rotable List	Rotable list to be provided by Bidder. The same will be studied during MET and amendments (if any) will be suggested by MET team. Vendors to carefully suggest rotable list based on envisaged repair level which is clearly spelt out in RFP. The rotable quantity suggested should be in multiples of repair points envisaged
18.	This is the article for Technical documentation. Supply of SMTs and their quantity is already covered at Annexure II to Appendix E. If the intent is just a list, same is already covered at 5 (b) (iv). Therefore, this serial number may be please be deleted.	Appendix E, Para 5 (c)	Confirmed
19.	This is the article for Technical documentation. Supply of STE and their quantity is already covered at Annexure II to Appendix E. If the intent is just a list, same is already covered at 5 (b) (iv). Therefore, this serial number may please be deleted.	Appendix E, Para 5 (d )	Confirmed
20.	Since ESP is vetted and evaluated during MET as part of NCNC trials, the sufficiency clause after MET should not be applied. Kindly confirm.	Appendix E, Para 9 (c)  Sufficiency Clause	As per RFP
21.	This is a sub-set of ISPL which is given at Ser. No 5 below. Hence this Ser. No. 3 (d) (i) be deleted.	Annexure III to Appendix E, Sr. No. 3(d)(i)  Part list with drawing reference	As per RFP (both are different)
22.	Kindly elaborate as to what is guage schedule	Annexure III to Appendix E, Sr. No. 9  Guage schedule and list of gauges	Vendor has to intimate details of gauges that have been used during production and QA/QC



23.	Kindly provide the 'in-service' gun towing vehicle details including the interfaces including towing attachment drawings, electrical/ pneumatic connection details, hook weight carrying capacity, etc.	Annexure I to Appendix F, Sr. No. 8(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 / semideserts / deserts.	TATA 6x6 / ALSS 6x6
24.	We request customer to specify max speed of target that they desire, so as to enable vendors to demonstrate the same speed during the trials. There are a number of targets available ranging from 60 m/sec to 150 m/sec. Customer to specify the target speed with tolerance to bring uniformity in trials, else the Buyer to provide targets for the trials to ensure the commonality.	Annexure I to Appendix F, Sr. No. 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)	As per GSQR (Refer Appendix A of RFP). Details of target being used will be provided during Pre-Trial Stage

25.	At Para 24(b)(i) of Appendix A, the operating temperature mentioned is -20 to -25 deg C. However, the DGQA trials specifies -30 deg C. Kindly clarify minimum operating temperature of the system	<p>Appendix A, Para 24(b)(i)</p> <p><b>Minimum.</b> Between minus 20 deg to minus 10 deg (Vendor certification for temperature beyond minus 20 upto minus 25).</p> <p>Annexure I to Appendix F, Sr. No. 24(b), In the column Remarks:</p> <p><b>Gun Sys.</b> QA evaluation shall be tested at extreme temperature of minus 30 degree Celsius</p>	Testing to be done as per JSS : 55555 and directives issued by MO Dte, IHQ of MoD Army Minus 25 is operational temperature and minus 30 is for storage temperature
26.	We understand that the Obsolescence Management Plan is to be submitted by L1 vendor during CNC. Please confirm.	<p>Part-I, Para 14 Obsolescence Management Plan</p> <p>Active Obsolescence Management Plan (where applicable). An actionable obsolescence management plan is to be proposed by the Bidder along with the mechanism for intimation of notification of obsolescence.</p> <p>(a) <b>Pre-Contract Phase.</b> 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 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 of DAP 2020.</p> <p>(b) <b>Post Contract Phase.</b> Refer Para 38 of the RFP.</p>	As per para 14 of Part-I of RFP

27.	We understand that cost of MRLS is to be provided only in Commercial Proposal and not Technical Proposal. Kindly confirm.	<p>Appendix E, Para 3(a)</p> <p><b><u>Manufacturer's Recommended List of Spares (MRLS)</u></b>. 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 two 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 &amp; Maintainability (R&amp;M) report for the proposed spares along with their Mean Time Between Failure (MTBF).</p>	Confirmed
28.	Please confirm if the IETM is preferable or mandatory? In case IETM is preferable, is there any additional weightage for L1 calculation for the bidders providing IETM	<p>Appendix E, Para 5</p> <p><b><u>Technical Documentation</u></b>. The Bidder will be required to provide the technical literature preferably in IETM (Interactive Electronic Training Manuals) in Level 4 format or higher.</p>	IETM is Mandatory

29.	We understand that the details of other OEMs are to be submitted only by the L1 Bidder during the CNC stage. Please confirm.	Appendix E, Para 6  <b>Details of OEMs.</b> 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:-	Ref Para 6 of Appendix E of RFP& the contention is not agreed to
30.	Please provide the expected duty cycle for providing the likely consumption rate of spares.	Annexure I to Appendix E, Para 12 of Note  Likely consumption rate of spares would be provided along with their Mean Time between Failure (MTBF) at the respective column	(a) As per RFP  (b) <b>Training.</b> 700hrs/Gun/Year to be used as planning figure  (c) <b>Firing.</b> 140rounds/Gun/Year be taken as planning figure
31.	We understand that, the APBG will be proportionately and automatically reduced until full extinction along with and prorate to value of each delivery, as evidenced by corresponding copy of GST invoice associated with dispatch. Kindly confirm.  For reduction of the BG, written communication from the Customer to the Bank will be needed.	Appendix G, Para 1.4.1 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 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 vendor is required to submit a request with calculation for reduction. On basis of the request from vendors the letter to vendor's bank will be issued

32.	In GST regime, the supplier is required to generate E-invoice containing QR code duly validated from Government GST portal and the invoice so generated gets registered on the GST portal. Therefore, GST invoice itself is a statutory document and to be treated as a sufficient document for proof of payment. Kindly confirm	Appendix G, Para 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.	As per RFP. A print out of GSTR/CA certificate is required by PCDA for processing of the payment for taxes. The same is required along with the claim
33.	Please confirm that ERV reckoning Date is same as last date of submission of the first commercial bid along with technical bid	Annexure I to Appendix G, Para 1(b)(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.	As per RFP
34.	Kindly confirm if the cost of ammunition is to be provided under Sr. 1 (A) of price bid format.	Appendix H, Para 2  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	Confirmed

35.	Being a Buy & Make (Indian) program with Indian companies as bidders, the State parties of seller is the Indian Government. Accordingly, any future acts of Government which affects the discharge of seller's obligation would need to be treated as force majeure since vendor cannot control it. Kindly confirm	Appendix J, Para 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	As per RFP
36.	Kindly confirm that a Signatory of the Company who has the same power as the Chief Executive Officer or has been delegated the power by the Chief Executive Officer can sign the PreContract Integrity Pact.	Appendix J, Para 7.1(f)  Undertakings on behalf of a bidding company will be made "in the name and on behalf of the company's chief executive officer";	As per RFP
37.	We understand that the ammunition required for test of the AD guns during PDI/ JRI will be drawn from the ammunition supplied as part of deliverables of the RFP and supplier will not be required to supply any additional ammunition for PDI / JRI of each AD gun. Kindly confirm	Appendix L, Para 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.	Ammunition for PDI is to be provided by the vendor and it will be over and above the deliverables

<p>38.</p>	<p>(i) In a pre-loaded gun feeder / hopper, is there any requirement of automatic selection of ammunition type (standard / smart) while engaging a target?</p> <p>(ii) Is the Auto-Loader mechanism along with the Hopper (8 / 16 rounds) of existing in-service L-70 system compliant with this requirement of automatic ammunition loading facilities?</p> <p>(iii) If the Auto-loader mechanism of existing inservice L70 system is compliant to this RFP requirement, then barring requirement of smart / advance ammunition, all parameters of RFP are completely satisfied by existing inservice upgraded L70 gun. Would it be allowed to field the same upgraded-L70 system with additional feature of smart ammunition under this RFP for replacement of 'in-service' guns?</p> <p>(iv) Reading point 15(e) in conjunction with 15(a), we envisage that Manual Loading of ammunition rounds in the Gun Stowage / Ammunition Loading system of Gun is acceptable with maximum two personnel. So the word Automatic Loading in 15(a) implies Automatic Feeding of rounds already loaded on the Gun, from the Ammunition Holding system on the Gun to the Ordnance of the Gun in continuous mode without any Manual intervention. Kindly clarify</p>	<p>Appendix A Para 15 (a) AD Gun must have automatic ammunition loading facilities</p> <p>Appendix A, Para 15 (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</p> <p>Appendix A, para 15 (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.</p> <p>Appendix L, para 19 (b) Automaticity Proof - In auto mode, 5 effective engagement cycles</p>	<p>As per RFP (Refer Annexure I to Appendix F)</p>
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<p>39.</p>	<p>(i) We understand that One effective engagement comprises 7 rounds OR engagement for 2 seconds, whichever is higher. Please confirm?</p> <p>(ii) What is the minimum number of 'ready to fire' rounds without reloading? (Minimum number of engagements is not listed)</p> <p>(iii) From Appendix A para 15(e) and Appendix L, para 19, we understand that minimum 5 engagement cycles are required to be fired without reloading (no manual intervention). Thus we infer &amp; understand that a minimum 35 number of rounds are required in ready to fire condition. Please confirm</p> <p>(iv) Please define manual mode and Auto mode?</p>	<p>Appendix A, Para 15 (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</p> <p>Appendix A, para 15 (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.</p> <p>Appendix L, para 19 (b) Automaticity Proof - In auto mode, 5 effective engagement cycles</p>	<p>(i) As per Para 15 (b) of Appendix A of RFP <b><i>Gun 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</i></b></p> <p>(ii) As per Para 15 (d) of Appendix A of RFP along with 15 (a) of Annexure I to Appendix F of RFP</p> <p>(iii) Refer to Para 15 (d) of Annexure I of Appendix F of RFP</p> <p>(iv) The word manual mode has not been used in RFP</p>
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40.	<p>(i) During firing from 'in service' fire control radar, is the gun required to be un-manned. Please confirm.</p> <p>(ii) Please clarify which in-service radars are required to be interfaced with Gun as per the RFP requirement.</p> <p>(iii) Please confirm that all the required electrical interfaces, communication protocol, OEM and User support will be made available post TEC for development of communication interface module between Gun and Radar.</p>	<p>Appendix A, para 8(b), page 19</p> <p>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.</p>	<p>As per RFP.</p> <p>Vendor to confirm feasibility of integrating gun with radar for TEC compliance.</p> <p>Radar details will be provided post submission of Eqpt for Trials</p>
	<p>(iv) Please confirm that Radar will be made available 6 months in advance for carrying out integration with the Gun. Please confirm that during and post Gun-Radar integration, radiation from Radar will be allowed for carrying out tracking and other system validation activities of the integrated system and Radiation would be permitted also during the internal firing trials before User trials.</p>		<p>Time will be accorded to L1 vendor</p>
	<p>(v) Please confirm, if while firing from 'in service' fire control radar, the ballistics and lead angle corrections are provided by the radar? Please note that the overall accuracies and system performance will be determined by the Radar accuracies. In such case, how can the performance of gun be determined?</p> <p>(vi) Further, since the ballistics and lead angle corrections are fed from in-service Fire Control Radar, we understand that necessary data for computations and programming of various modes of Smart ammunitions will also be provided by the Radar. Please confirm.</p>		<p>Trials will be conducted based on EOFCS (Refer Para 19 of Annexure I to Appendix F of RFP)</p>
	<p>(vii) It is understood that the in-service radars will have necessary meteorological equipment and hence not required to be provided on the Gun. Please confirm</p>		<p>As per RFP</p>

41.	We understand that evaluation of hit probability will be on the basis of multiple engagement trials (3 out of 5). This being a critical parameter to evaluate the system reliability and accuracies, we request that this aspect be amplified and finalized before submitting proposal	Appendix A, Para 19  Hit probability of minimum 0.6 during one effective engagement cycle at 70% of the maximum effective range with EOFCS using smart ammunition.	Will be confirmed during Pre Trial meeting. Vendor may propose trial methodology before trial meeting that will be examined and implemented if found as per Para 3 of Appendix F in accordance with RFP
42	It is understood that suspension / debarment by MoD would be applicable as on date of issue of RFP. Please confirm. Please provide the latest list of suspended/ debarred companies as on date of issue of RFP.	Part I, para 5(a)  The Bidder shall also declare that their subcontractor(s)/ supplier(s)/technology partner(s) are not Suspended or Debarred by Ministry of Defence. In case the subcontractor(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.	Details of firms debarred/put on hold/suspended etc from doing business with MoD as promulgated vide MoD ID no 31013/1/2016-D (Vig) Volume-II dated 12 Nov 2021 is attached as annexure.
43	Kindly provide details of in-service target system to be provided by vendors for trials. system for validation of parameters as given at Annexure. Annexure I to Appendix F, para 10 Vendor certification for targets above speeds of 'inservice' target system at the time of evaluation	Appendix F, para 2(c)  Vendor to provide suitable number of target For level playing field, the target system and its performance during trials have to be uniform for all vendors. It is proposed that Buyer provides and operates the target system for all vendors during trials.	(a) As per RFP. Methodology for conduct will be discussed/ clarified during Pre Trial Meeting  (b) The broad tech specification of in service target system are as under :-  (i) <u>BPTA</u> . Clean : 80 m/s & Tow : 60 m/s  (ii) <u>MEAT</u> . 135 m/s  (iii) <u>Jet 80</u> .180 m/s

44.	Kindly clarify the start and end states of the system for "Into action" and "Out of action" drills.	Annexure I to Appendix F- Detailed Trial Methodology, Para 6  <b><u>Into Action and Out of Action</u></b> . Into action or out of action time both during day and night with a trained crew should not exceed 10 minutes.	<b><u>Into Action</u></b> . Commences only after the gun has been unhooked from the Prime Mover and ends when the gun is ready to Fire.  <b><u>Out of Action</u></b> . Commence when Gun is ready to fire & ends when gun is ready to be towed.
45.	Kindly specify what is the "adequate tracking range" for EOFCS system.	Annexure I to Appendix F - Detailed Trial Methodology, Para 20 (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 inservice target system.)	(a) Wrong Ref by the Vendor.  (b) PI ref Para 20 of Appx A of RFP  (c) To be clarified during Pre-Trial Meeting to TEC compliant vendors  (d) Guns are required to achieve 60 % hit at 70% of maximum range as given in the RFP using EOFCS. The detailed methodology will be clarified during Pre-Trial Meeting
46.	Kindly elaborate on the list of tests that will be conducted in plains/desert and at HAA.	Appendix F Para 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).	Will be clarified during Pre Trial Meeting

47.	<p>Kindly elaborate how the effective range (4000m) &amp; height (2500m) against air targets and range (2000m) at ground target will be verified.</p>	<p>Annexure I to Appendix F – Detailed Trial Methodology</p> <p>Para 9(b) - Effective Range against Air Targets. Upto 4000m or more.</p> <p>Para 9(c) - Effective Height against Air Targets. Upto 2500m or more.</p> <p>Para 11 - Gun should be capable of engaging ground targets upto 2000m or more</p>	<p>Will be clarified during Pre Trial Meeting</p>
48.	<p>(a) Para 15(b) &amp; 19 of Annexure I to Appendix F are contradictory. Effective engagement is defined as 7 rounds or more for minimum 2 seconds. Hence number of rounds per engagement will be a function of rate of fire of the gun. Therefore, number of rounds given to all vendors should be as per rate of fire or same number of rounds. Kindly clarify as this will have impact on cost per kill for the system.</p> <p>(b) We request you to kindly provide target scenarios, ranges, firing arcs, time for engagement, number of rounds and firing burst length.</p>	<p>Annexure I to Appendix F: Detailed Trial Methodology</p> <p>Para 15 (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.</p> <p>Para 19 - (Remarks)</p> <p>(i) Same number of rounds will be given to all vendors per engagement to prove compliance.</p> <p>(ii) Number of rounds per engagement to be finalised prior to the trials</p>	<p>Will be clarified during Pre Trial Meeting</p>

49.	<p>We require support of Indian Army for</p> <ul style="list-style-type: none"> <li>i. End Use Certificates and other documentation for Imports</li> <li>ii. Allocation of Ranges for internal firing trials</li> <li>iii. Ammunition handling and storage</li> <li>iv. In-service fire control radar along with trained operators</li> </ul>	General	All assistance will be extended to the vendors as per SOP on the subject
50.	<p>Though this clause is as per DAP provision, we recommend that this be taken up for being considered as a force majeure.</p> <p>A restriction imposed by Govt., in any event, is a force majeure event being beyond the control of Bidde</p>	<p>Part 1 Para 18</p> <p>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 licence 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</p>	No deviation from RFP
51.	<p>Part 1 Para 11 (Warranty) mentions “The deliverables supplied shall carry a comprehensive warranty warranty on pro-rata basis”, request “pro rata basis” to be incorporated in the text at para 2 of Appendix C for clarity purpose.</p>	<p>Appendix C para 2</p> <p>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).</p>	As per RFP.

52.	We recommend the following: the BUYER may, at his discretion withhold cost of the specific lot/batch or 1% of the total cost, whichever is lower, until the completion of the contract.	<p>Appendix G para 4 (Liquidated Damages)</p> <p>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</p>	<p>As per RFP.</p> <p>The requirement is as mandated by DAP-2020 &amp; the higher value will be withheld</p>
53.	Please confirm that the Denial Clause will be inapplicable even beyond the original delivery period if the delivery period is extended due to a delay not attributable the Seller or due to force majeure event?	<p>Appendix G para 5 (Denial Clause)</p> <p>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.</p>	As per RFP
54.	We recommend "ERV should be allowed if the delay is due to force majeure also "	<p>Annexure I to Appendix G para 1 (b) (iii)</p> <p>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.</p>	As per RFP

55.	The list of Force Majeure events is very restricted. It is also not in line with the Clause 27.2 of the Standard Contract Documents which is part of the DAP 2020. Suggest that this clause 5.2 be aligned to Clause 27.2 of the Standard Contract Document	Annexure J Para 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.	As per RFP.  Both clauses cover the same events
56.	As Acts of government are beyond the reasonable control of the parties and therefore should be treated as a force majeure. Please confirm.	Annexure J Para 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.	As per RFP
57.	Will this para (marked in bold) be applicable even for the units for which complete set of certification reports will be submitted as mentioned in para before. Please confirm	Part I Para 40 (d)  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.	As per RFP

58.	<p>Following inputs would be required from User post TEC:</p> <ol style="list-style-type: none"> <li>1. Target position, target velocities, timestamp, Gun positioning data, MET data, radar modes</li> <li>2. Kindly confirm what all data is required from gun to radar for display purpose, if any.</li> <li>3. Kindly confirm philosophy of operation – whether radar gives gun position data (ballistics computation running in radar) OR radar gives target information only (in which case ballistics computation to be done at gun)</li> <li>4. Communication interface – Ethernet based UDP protocol is preferred. IP address and port numbers can be decided at the time of integration. Data sent by radar at rate of 10 ms or faster for efficient implementation.</li> <li>5. Mechanism for alignment and boresighting procedure between radars and gun</li> <li>6. Mechanism for time sync and handshake between radars and gun</li> </ol>	<p>Appendix A Para 8 (b)</p> <p>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.</p>	<p>Details to be provided post TEC/submission of EUT</p>
59.	<p>Kindly elaborate on Hit Probability Definition for in-service Radar and for EOFCS.</p>	<p>Appendix A para 19</p> <p><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</p>	<p>Will be confirmed during Pre Trial Meeting. Due attention also drawn to Para 8 (b) of Annexure 1 to Appendix F of RFP</p>



60.	Can a 415V 3-phase external mains / generator be used as an alternative option. Please confirm.	<p>Appendix A Para 21 (b)</p> <p>Ability to operate from commercial mains / generator of 220V 50Hz AC supply</p>	<p>(a) Commercial mains is the power supply that is available in units at peace location</p> <p>(b) As per RFP</p>
61.	We understand that at D level, Faulty Electronic Boards will be tested on STE for functional/nonfunctional aspects. The identified Faulty Boards will be sent to OEM for the assessment of repairability. Please confirm.	<p>Appendix E Para 1 (b) (i)</p> <p>All Special Maintenance Tools, jigs, fixtures and test equipment for carrying out repairs up to component/ PCBs/ module level.</p>	<p>- At D level, component level repair of electronic Boards is preferable. Ref Para 1(b) of Appendix E of RFP</p>
62.	Part I, Para 40, Field Evaluation Trials sub-para (d) specifies that submission of reports will suffice the EMI/EMC compliance. Please confirm	<p>Appendix F para 16</p> <p>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.</p>	<p>Para 40 (d), Part I to be read in conjunction with Para 16 of Appendix F</p>

**M/s BHEL**

1.	<ul style="list-style-type: none"><li>- What is expected time frame for JRI after receipt of Gun of Consignee Premises.</li><li>- Expected time frame for acceptance after completion of JRI.</li><li>- Can we consider the date of commencement of Warranty as date of successful.</li></ul>	Part-1 Para-1 – <b>Warranty</b>	Owing to involvement of both parties the period for JRI is not quantified. Commencement of warranty will be from date of acceptance post JRI
2.	Kindly provide the referred specification i.e AO 8/93 and also SAO 2/S/2006/MGO	Part-1 Para-13 – <b>Product Support</b>	To be provided to the L1 vendor
3.	Kindly clarify that syllabus will be limited to the man-days mentioned in the RFP and any additional man days required to cover the syllabus will be paid additionally at mutually agreed terms and conditions	Part-1 Para-15 (Training of Crew and Maintenance Personnel)	To be discussed during CNC
4.	Kindly clarify the procedure for evaluation of reliability and prediction, if similar equipment is not available.	Part-2 Para-29 (Technical Offer)	As per vendor solution
5.	Kindly clarify the types of ammunitions alongwith their nos required for FET including those required for QA/QC	Part-2 Para-39 (Evaluation of Technical Offers)	(a) As per RFP.  (b) Qty of amn required for DGQA Technical evaluation be intimated after receipt of Tech documents from vendor during TEC. Please refer Para 21 of Appendix L (Page No 100) of RFP

6.	<ul style="list-style-type: none"> <li>- Kindly provide max allowable dimensions of complete gun system in packed condition for transportation through road, rail, air and ship.</li> <li>- What is ground clearance required for the gun cart during towed condition.</li> <li>- Is it required to detach the front and rear axle wheel assembly from Gun platform for firing position like in Old L70 Guns.</li> </ul>	Appendix 'A' Para 2 (Mobility)	<p>(a) As per Para 2(c) and Para 3 of Appendix A of the RFP</p> <p>(b) It is clarified that the gun should meet the ODC requirements as specified at Para 3 of Appendix A of RFP.</p> <p>(c) The allowable transport dimensions of in service aircraft are as under:-</p> <ul style="list-style-type: none"> <li>(i) Length : 20m</li> <li>(ii) Breadth : 3.3m</li> <li>(iii) Height : 3.4 m</li> </ul>
7.	Please provide details of action included and excluded in "Into and Out of Action"	Appendix A Para 6	All actions required to be carried out by operator to bring gun into Firing position from traveling position & vice versa.
8.	Please confirm if Gun System is manual mode without on-board crew is acceptable.	Appendix A Para 7	As per RFP

9.	Kindly provide details of 'In service' target system.	Appendix A 10 (a)	(a) To be intimated during Pre Trial Meeting  (b) The broad tech specification of in service target system are as under :-  (i) <u>BPTA</u> . Clean : 80 m/s & Tow : 60 m/s  (ii) <u>MEAT</u> . 135 m/s  (iii) <u>Jet 80</u> . 180 m/s
10.	Kindly clarify if electro mechanical actuators are required for carriage system also Or only applicable for gun travers and elevation.	Appendix A Para 12	For traverse& elevation
11.	Kindly elaborate the role of GPS in operation of the gun.	Appendix A Para 14	As per RFP. GPS is required
12.	Kindly clarify the meaning of automatic ammunition loading facilities. Does it mean additional automatic facility is required to load ammunition in auto-loader.	Appendix A Para 15 (a) (Ammunition System)	As per RFP

13.	Air Burst Ammunition can be fired but muzzle velocity correction after or during firing cannot be done. As per Para 15 (c) (i) ( <b>Air Burst Ammunition / PFFC ammunition will not be considered as advanced ammunition</b> )	Appendix A Para 15 (c)-i	As per RFP .Ammunition types have already been given in RFP.  There is a typo error in Para 15 (c) (i) of Appendix A of RFP. Para 15 (c) (i) to be amended as <b>“Advanced ammunition with self-destruct capability (Pre-Fragmented Programmable Proximity Fuze or similar ammunition). (Air Burst Ammunition/ PFFC will not be considered as advanced ammunition).</b>
14.	Kindly explain the fire limiting system (Taboo).	Appendix A Para 17	As per RFP
15.	Where should the operator be located ? On board or a few meters away from ADG connected with wired display and control?  How is the target communication to the AD Guns?  Do all AD Gun components like battery, genset etc, need to be on one platform?	Appendix A Para 18	As per Appendix A of RFP

16.	- Please confirm whether Battery bank external to Gun System will be accepted or needs to be on board only.	Appendix A Para 21	As per Para 5 & 21 of Appendix A of RFP
	- Request if USER will accept a Canopied standalone power supply enclosure comprising Batteries, Power Supply converters and APU mounted on a separate towed platform and will be connected through cable with Gun System during Operation.		No
	- During transition from Battery Operation to Mains/ Genset operation of vice versa, will interruption be accepted of USER wants Uninterrupted Supply.		Uninterrupted power supply is not mentioned in RFP
17.	<p>Please confirm that APU is not prime power source for Gun Operation and will be used only for battery charging operation while Gun System is in operation or in off condition. APU shall not be tested for Gun Operation.</p> <p><b>Request :</b>CPCB IV comes in effect from Dec 2023 and so APU with CPCB II certification cannot be used after this period. Transition from CPCB II to CPCB IV will change the engine design/ engine model and meaning. Firm suggest that battery charging operation should be tested on commercial mains and by using any commercial off the shelf portable Genset provided by Firm. Actual APU with CPCB IV certification will be offered for evaluation post Dec 2023.</p>	Appendix A Para 21 (a)	<p>(a) As per Para 21 (C) of Appx A of RFP, the gun should have the capability to recharge batteries while the system is in operation.</p> <p>(b) Batteries are to be charged by APU (primary power source) in field and by APU &amp; mains in peace.</p> <p>(b) The gun should function on Battery / APU in field &amp; The gun should function on Battery / APU / Mains in Peace location.</p> <p>(c) It is clarified that the gun should function on battery/APU in field &amp; on battery/APU/mains in peace locations.</p> <p>(d) APU will be tested for gun operation.</p>
18.	<p>- Please confirm that Mains/ Gen set supply will be 1 phase 220 V 50Hz.</p> <p>- Will there be any evaluation where batteries are isolated/ disconnected and system should work with its full capacity on Mains/ Gen Set 220V Supply.</p>	Appendix A Para 21 (b)	<p>(i) Commercial power supply (220 V 50Hz) as available in units</p> <p>(ii) Confirmed</p>
19.	EMI/ EMC test have been carried only according to the MIL STD 461E	Appendix A Para 23	As per Para 23 of Appendix A of RFP

20.	Software can be restored only by OEM personnel to assure a cyber security resilience.	Appendix A Para 26	As per Para 26 of Appendix A of RFP. OEM will provide means for restoration of software in field conditions
21.	Word 'preferable' is subjective hence please confirm if its mandatory to consider manuals as per IETM IV.	Appendix E Para 5	IETM (IV) is Mandatory
22.	JSS55555: 2020 shall be referred for environmental test conditions only, however functional testing should be done as per ATP prepared by OEM as Units are designed to meet specific system requirements. CQAL should not refer to any other standard for functional testing like regulation, endurance, efficiency etc.	Appendix F Para 12 and 12 (d)	As per RFP
23.	We understand the EMI/EMC evaluation will be done by respective AHSP at System level and not at sub system level. Please confirm.	Appendix F Para 16 & 17	- As per Para 23 of Appendix A of RFP
24.	Kindly clarify whether DCF technique is applicable in ADG procurement ? We understand there is zero BNE cost in ADG procurement.	Appendix H Para 1	Please refer Page No 294 Para 4 of Appendix N to Schedule I to Chapter II in DAP-2020

25.	RFP states that 37,440 nos advanced ammunition and 104,136 Nos standard ammunition are required:	-	-
	(a) Request you to kindly clarify the understanding of advanced ammunition. Is it supposed to be PFFC rounds with programmable fuze?	Not Referred	<p>(a) As per RFP, Ammunition types have already been given in RFP.</p> <p>(b) There is a typo error in Para 15 (c) (i) of Appendix A of RFP. Para 15 (c) (i) to be amended as <b>“Advanced ammunition with self-destruct capability (Pre-Fragmented Programmable Proximity Fuze or similar ammunition). (Air Burst Ammunition/ PFFC will not be considered as advanced ammunition).</b></p>
	(b) Request you to kindly clarify the understanding of standard ammunition. Will all the 104,136 rounds will be of the same type? Request you kindly provide details on the type. Would these be PFFC rounds with proximity fuze?	Not Referred	<p>(a) As per Para15 (c) (ii) of Appendix A of RFP.</p> <p>(b) HE rounds with SD capability and tracer</p>
26.	Can the propellant be imported? Since, the same is under critical technologies and the technology is already available in India, kindly clarify if the propellant can be imported	Not Referred	As per Para 21 of RFP



**M/s Bharat Forge**

1.	<p>An improved technology gun with advanced ammunition can achieve specified Hit probability of 0.6 with minimal rounds. Hence, the definition of an effective engagement and the minimum number of rounds for such an effective engagement can be better stipulated by the gun OEM depending on their solution.</p> <p>Kindly clarify as it will help reduce ammunition expenditure due to better capability of the gun and cost the customer lesser in logistics</p>	<p>Page 19 Appendix A (Also the reference related to it in the draft trial directive Page 55 Para 19)</p> <p>Hit probability</p>	<p>As per RFP</p>
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**BEL, Chennai**

1.	<p>Methodology for evaluating and calculating the hit probability of 0.6.</p>	<p>RFP Ref Appendix A, Para 19</p>	<p>(a) Ref Para 3 of Appendix F of RFP</p> <p>(b) Guns are required to achieve 60 % hit at 70% of maximum range given in the RFP using EOFCS</p> <p>(c) The detailed methodology will be clarified during Pre-Trial Meeting to TEC compliant vendors</p> <p>(d) As per RFP</p>
2.	<p>Methodology and PASS/FAIL criteria for evaluating ground target engagement.</p>	<p>RFP Ref Appendix A, Para 11</p>	<p>To be intimated during Pre Trial Meeting</p>

3.	Details of target system may be provided.	RFP Ref Appendix F, Para 2 (c)	<p>(a) To be intimated during Pre Trial Meeting</p> <p>(b) The broad tech specification of in service target system are as under :-</p> <p>(i) <u>BPTA</u>. Clean : 80 m/s &amp; Tow : 60 m/s</p> <p>(ii) <u>MEAT</u>. 135 m/s</p> <p>(iii) <u>Jet 80</u>. 180 m/s</p>
4.	It is mandatory for the Gunner to sit inside the Gun during firing in EOFCS mode operation?	Not Referred	As per RFP, it is a specified vendor solution
5.	Detailed trial methodology to be provided for preparation of Technical & Commercial proposal.	Not Referred	Provided as per Annexure I to Appendix F of RFP
6.	Expected time line for FET.	Not Referred	Trials are guided by DAP-2020, Appendix L to Schedule I of Chapter II refer
7.	<b><u>ERV Clause</u></b> : The ERV reckoning date will be the last date of submission of commercial bids as per RFP. Clarity may be provided for the date to be considered if the bid is extended at the last moment.	RFP ref Annexure I to Appendix G	As per Para 1(b) (iv) of Annexure I to Appendix G of RFP
8.	<b><u>Payment Terms wrt MRLS</u></b> : 15% Advance, 60% on Dispatch, 35% on Delivery and 5% on IC verification. Kindly clarify 15% advance is available for MRLS (as the Advance on Base Contract Price including MRLS). IC Verification may be incorporated as product Evaluation only.		<p><b>This is a Typo Error in RFP &amp; needs to be suitable amended as under :-</b></p> <p>(a) <u>Para 2 (c) (viii) to Appx G of</u></p>

	<b>Payment Terms wrt Training</b> : 15% Advance, 85% on Completion of Training and 5% on IC Verification. Kindly clarify 5% on IC verification is applicable for Training (as the Advance on Base Contract Price including Training).	RFP ref Annexure V to Appendix G	<u>RFP</u> : For 35% read 80%.  (b) <u>Para 2 (c) (vii) to Appx G of RFP</u> : The stage payment should be 80% and not 85%.
9.	<b>LD Clause</b> : Delivery delayed beyond the delivery date specified in order is subject to deduction towards liquidated damages of 0.5% per week delay, or part thereof, subject to maximum of 10%.	RFP ref Appendix G SI No 4	As per Para 4 of Appendix G to RFP
10.	<b>Year of Production</b> : Assemblies & Sub-Assemblies of AD Guns and Ammunition have Long-Lead Time and need to be Procured beforehand to meet the Delivery Timelines as per RFP requirement.  Kindly Clarify the Clause	RFP ref Part-I General Requirements SI No 8	As per RFP. Due to this reason first gun is sought after two years



**IMMEDIATE**

**Ministry of Defence**

**D(Vigilance)**

**Sub: Details of firms debarred/put on hold/suspended etc from doing business with MoD-reg.**

In accordance with MoD Guidelines for penalties in Business Dealings with entities dated 21.11.2016 and FAQs circulated vide ID Note No. 31013/1/2016-D(Vig) Vol.II dated 30.12.2016, an updated list of firms debarred/put on hold/suspended etc from doing business with MoD as on date is enclosed herewith.

2. It is requested to upload the same on MoD website (under OM & Orders) for information of all concerned.
3. This issues with the approval of CVO.

Encl: as above.

  
(P Sasikumar)  
Director (Vigilance)

**US(IT)**

MoD ID. No. 31013/1/2016-D(Vig) Vol.II dated 12.11.2021

Copy to:-

JS (Establishment): For information.

In accordance with MoD directions circulated vide ID Note No. 31013/1/2016-D(Vig) Vol.II dated 30.12.2016, details of firms debarred/put on hold/suspended etc from doing business with MoD as on 12.11.2021:-

S.N.	Name of Firms	
1.	<b>Debarred Firms - Total 6</b>	
	i. M/s Singapore Technologies Kinetics Ltd. (STK) ii. M/s Israel Military Industries Ltd. (IMI) iii. M/s T. S. Kisan & Co. Pvt. Ltd., New Delhi. iv. M/s R. K. Machine Tools Ltd., Ludhiana. v. M/s Rheinmetall Air Defence (RAD), Zurich. vi. M/s Corporation Defence, Russia.	MoD ID dated 11.04.2012 and 17.09.2013
2.	<b>Put on hold/Suspended firms - Total 13</b>	
	i. M/s IDS, Tunisia. ii. M/s Infotech Design System (IDS), Mauritius. iii. M/s IDS Infotech Ltd, Mohali. iv. M/s Aeromatrix Info. Solution Pvt. Ltd., Chandigarh.	MoD ID dated 03.07.2014.
	v. M/s Shanx Oceanering vi. Inter Spiro India Pvt Ltd. vii. M/s Experts Systems viii. M/s Unitech Enterprises ix. M/s Kelvin Engineering x. Atlas group of companies including M/s Atlas Telecom and M/s Atlas Defence Services.	MoD ID dated 09.08.2006
	xi. M/s Offset India Solutions (P) Ltd. and its Group companies/functionaries.	MoD ID dated 05.01.2018
	xii. M/s Pilatus Aircraft Ltd, Switzerland	MoD ID dated 12.07.2019
	xiii. M/s Vectra Advanced Engineering Pvt Ltd (VAEPL)	MoD ID dated 14.08.2020
3.	<b>Restricted Procurement from firms - Total 02</b>	
	i. M/s Rolls Royce and its allied & subsidiaries companies.	MoD ID dated 28.07.2014
	ii. M/s Tatra Trucks a.s. of Czech Republic.	MoD ID dated 22.12.2014

\*\* Business dealings with M/s SARR Freights Corporation & Associated/ Allied Firms were suspended vide MoD order dated 19.02.2021. Hon'ble High Court of Delhi, in a case relating to Department of Defence Production, vide order dated 25.05.2021 stayed the operation of MoD order dated 19.02.2021 till 31.08.2021. Further, Hon'ble High Court of Delhi vide directions dated 31.08.2021 has extended the stay till next date of hearing i.e. 07.01.2022.

