# Hybrid Advanced Research Announcement (ARA) (Open ARA and ARA with Closed Calls)

## Closed CALL- 001 Nuclear, Electromagnetic, & Laser Survivability Assessment and Enhancement

**ARA, Closed Call 001**: This is a call to ARA FA8650-22-S-5004 and the Call is entitled "Nuclear, Electromagnetic, & Laser Survivability Assessment and Enhancement." This is a one-step Call. Please refer to ARA FA8650-22-S-5004 and Amendments for additional information (sam.gov link below). Items delineated in this document are specific to this Call.

SAM.gov

**This Call for proposals is being issued with ARA FA8650-22-S-5004. Offerors must refer to FA8650-22-S-5004 and Amendments, if any exist, which must be read in conjunction with this Call.**

**Proposal Due Date and Time:** Proposal(s) are due no later than **20 August 2024, 4.00 p.m. Wright-Patterson AFB, OH local time.**

The AF requests electronic proposals be submitted using BOTH DoD SAFE (primary method) and email (backup method) to the following addresses:

Kelsey.emory@us.af.mil – Contracting Officer
Justin.hull@us.af.mil – Contracting Specialist
Joseph.shumaker.2@us.af.mil – Program Manager

If the contractor needs a DoD SAFE drop-off invite from the Air Force, please send that request to Kelsey Emory and Justin Hull no later than 7 days prior to the due date of proposals to ensure a drop off code is provided in a timely manner.

**Award Notices**: Offerors will be notified whether their proposal is recommended for award on or about 23 September 2024. The notification is not to be construed to mean the award of a contract is assured, as availability of funds and successful negotiations are prerequisites to any award.

**Anticipated Number of Awards:** The Air Force anticipates awarding **One (1)** Federal Acquisition Regulation (FAR) award under this ARA Call. However, the Air Force reserves the right to award zero, one, or more contracts for all, some or none of the solicited effort based on the offeror's ability to perform desired work and funding fluctuations.

It is anticipated that contracts awarded under this ARA will generally be Cost Plus Fixed Fee (CPFF) and/or Firm Fixed Price (FFP). REMINDER: Cost reimbursement contracts require successful offerors to have an accounting system considered adequate for tracking costs applicable to the contract.

**Address technical questions to the Technical POC:** For CALL- 001, the Technical POC is Joseph Shumaker, joseph.shumaker.2@us.af.mil.

**Address contracting questions to the Contracting POC:** For CALL – 001, the Contracting POCs are Kelsey Emory, kelsey.emory@us.af.mil, and Justin Hull, justin.hull@us.af.mil.

## Statement of Objectives

### 1.0 PROGRAM GOAL:

This Statement of Objectives (SOO) outlines the objectives, deliverables, and requirements for nuclear, electromagnetic survivability, and laser survivability assessment; including nuclear, electromagnetic, and laser survivability enhancement. This effort shall evaluate the nuclear, electromagnetic, and laser resilience of multiple system/s or infrastructure/s, identify vulnerabilities, and propose/ develop / transition measures to enhance its survivability against nuclear, electromagnetic, and/or laser threats. The Independent Verification and Validation Research Development Test & Evaluation shall span the Advanced Technology Development, Advanced Component Development and Prototype, System Development and Demonstration, RDT&E Management Support and fielded systems.

### 2.0 SCOPE:

The scope of work for this contract includes, but is not limited to, the following activities:

a. Review existing documentation, specifications, and designs related to the system or infrastructure under assessment.

b. Conduct site visits and survey to assess the physical layout, electrical systems, and components of the system or infrastructure.

c. Perform electromagnetic vulnerability analysis, including analysis of electromagnetic compatibility (EMC) and electromagnetic interference (EMI) issues.

d. Perform laser vulnerability analysis, including analysis of laser power levels, wavelengths, and potential sources of laser threats.

e. Perform nuclear (RF) vulnerability analysis to determine potential threats.

f. Evaluate the system's electromagnetic shielding effectiveness, grounding, and bonding arrangements.

g. Evaluate the system's laser protection measures, including shielding effectiveness, optical filters, and laser detection systems.

h. Evaluate the system’s nuclear protection measures, including RF shielding effectiveness.

i. Identify potential points of vulnerability to electromagnetic threats and assess the potential impact on critical functions and operations.

j. Develop a set of recommended countermeasures, including design modifications, shielding enhancements, and grounding improvements, to mitigate identified vulnerabilities by advanced materials solutions, component development, and prototyping and/or system development and demonstration as required.

k. Provide cost estimates and technical feasibility assessments for implementing the proposed countermeasures.

l. Prepare a comprehensive report that includes an executive summary, assessment findings, recommended countermeasures, cost estimates, and implementation roadmap.

**3.0 TECHNICAL:**

**3.1 Objectives:**

The primary objectives are as follows:

a. Conduct a comprehensive assessment/s of the nuclear, electromagnetic, or laser survivability of multiple designated system/s or infrastructure/s.

b. Identify potential vulnerabilities and risks associated with laser threats, including intentional and unintentional laser exposures.

c. Identify potential vulnerabilities and risks associated with electromagnetic threats such as electromagnetic pulse (EMP), intentional electromagnetic interference (IEMI), and high-power microwaves (HPM).

d. Identify potential vulnerabilities and risks associated with nuclear threats such as RF.

e. Evaluate the system's current electromagnetic shielding, grounding, and bonding capabilities.

f. Evaluate the system's current laser protection measures, including laser shielding, filtering, and detection capabilities.

g. Evaluate the system’s current nuclear protection measures, including RF shielding capabilities.

h. Perform advanced component development and prototyping and/or system development and demonstration as required to enable recommendations and countermeasures to enhance the electromagnetic survivability of the system/s or infrastructure/s.

i. Develop and propose recommendations and countermeasures to enhance the laser survivability of the system/s or infrastructure/s.

j. Develop and propose recommendations and countermeasures to enhance nuclear survivability of the system/s or infrastructure/s.

k. Provide a detailed report summarizing the assessment findings, recommendations, and proposed countermeasures.

**3.2 Desired Deliverables:**

See attached DRAFT Contract Data Requirements List (CDRLs) Attachment 1. Additionally, prototypes deliverables may also be required.

**3.3 Project Management:**

The contractor shall assign a dedicated project manager who will be responsible for coordinating all project activities, managing resources, and ensuring timely delivery of all deliverables. The project manager will serve as the primary point of contact for the client.

**4.0 SYSTEM SAFETY:**

The contractor shall comply with all federal, state, and local safety and environmental regulations. This Program requires that the contractor perform a safety assessment per the safety policies of the organization and applicable regulations and laws. The contractor shall notify the AFRL Technical Point of Contact (TPOC) that the safety assessment has been completed according to organizational policies and applicable regulations.

**5.0 SECURITY REQUIREMENTS:**

**5.1** The contractor shall maintain strict confidentiality regarding all information obtained during the course of the contract. The contractor shall execute a blanket government NDA and provide the government unlimited data rights. The contractor shall not transfer any information learned under this contract into IRAD programs. Any classified or sensitive information shall be handled in accordance with applicable security protocols and regulations. **The minimum classification of contractors performing this effort is Top Secret, the maximum anticipated classification is Top Secret/ SCI / SAP – MULTIPLE POGRAMS.**

**5.2 Operations Security (OPSEC):** The contractor shall participate in all activities associated with the disciplines of the organization's Industrial Security, Information Security, Personnel Security, Operations Security (OPSEC), and Antiterrorism programs, following appropriate measures in each program as required for this particular contract. Security measures are required to reduce program vulnerability from successful adversary collection, exploitation of critical information, and violations of export control requirements. The prime contractor shall ensure all subcontractors, if applicable, conform to these requirements as required by the prime contractor.

**5.3 Program Protection Plan (PPP) Requirements:** Any potential critical program information (CPI) generated as part of this effort will be reviewed to determine the need for a PPP or to be included as part of an existing PPP.

**5.4 CUI Information:** The contractor shall ensure that personnel associated with this effort have annual training on OPSEC as well as Information Handling, Marking, Storage, Transmission, Release, Destruction and Reporting points related to Controlled Unclassified Information (CUI).

**5.5 Sharing of Information:** Approval of technical and programmatic information shared external to this effort shall be approved by the government program manager.

**6.0 SCHEDULE/FUNDING:**

**6.1** Overall Effort:

The period of performance for the technical effort will be 57-months technical plus an additional 3-months for preparation, review, revision, and submittal of the approved final technical report, for a total of 60-months.

**6.2** Funding Profile:

Funding for Call 001 is $49,000,000. This funding profile is an estimate only and not a contractual obligation for funding. All funding is subject to change due to Government discretion and availability. Potential offerors should be aware that due to unanticipated budget fluctuations funding in any or all areas may change with little or no notice.

| Budget Type | FY24 ($k) | FY25 ($k) | FY26 | FY27 | FY28 |
|---|---|---|---|---|---|
| AF (6.3-6.7) | 9000 | 6000 | 6000 | 6000 | 6000 |
| Navy 1804 | 500 | 2000 | 2000 | 2000 | 2000 |
| Army 2020 | 500 | 1000 | 2000 | 2000 | 2000 |
| **Totals** | **10000** | **9000** | **10000** | **10000** | **10000** |

*Statement of Objective End*

## Proposal and Submission Information

**Closed Call Proposal Instructions:** See ARA FA8650-22-S-5004, Section IV. Proposal and Submission Information, paragraph 2 Closed Call Proposal Instructions.

**The Government is seeking both a Technical/Management Proposal, to include a proposed Statement of Work, and Cost/Business Proposal in response to this Call.**

**Export Control:** Information involved in this Closed Call and award is subject to Export Control (International Traffic in Arms Regulation (ITAR) 22 CFR 120-131), or Export Administration Regulations (EAR) (15 CFR 710-774). A Certified DD Form 2345, Militarily Critical Technical Data Agreement, will be required to be submitted with proposals.

**Export-Controlled Items:** This acquisition is expected to generate or require access to export controlled items. As prescribed by DFARS 225.7901-4, DFARS 252.225-7048, Export-Controlled Item (Jun 2013) is referenced in this solicitation. This clause shall be contained in the resulting contract.

**Data Rights Desired:**

a) Other Than Commercial Technical Data: Unlimited Rights
b) Other Than Commercial Computer Software: Unlimited Rights
c) Other Than Commercial Software Documentation: Unlimited Rights
d) Commercial Computer Software Rights: Customary Commercial License consistent with Federal statutes and regulations

**Closed Call Proposal Review Information:** See ARA FA8650-22-S-5004, Section V. Closed Call Proposal Review Information.

**This Call for proposals is being issued with ARA FA8650-22-S-5004. Offerors must refer to FA8650-22-S-5004 and Amendments, if any exist, which must be read in conjunction with this Call.**

## Call 001 Attachments

1. **Call 001 Contract Data Requirements List (CDRL)**
2. **Call 001 Solicitation DD254**
3. **Call 001 Base Support Requirement/Information**