Open Two-Step Advanced Research Announcement (ARA)

Overview Information

This amendment is an annual notice of an Open ARA. White papers are still being accepted for against this ARA. Please see the full BAA announcement, posted 4 May 2018, for specific details on white paper submissions.

To access hyperlinks from this electronic solicitation – Hit CTRL and click on the link.

NAICS Code: The NAICS Code for this acquisition is 541715 and the small business size is 1,000 employees.

Federal Agency Name: Air Force Research Laboratory, AFRL/RXS Materials and Manufacturing Directorate, Advanced Power and Technology Office (APTO)

ARA Title: APTO – Government Requirement for Advanced Power and Energy (GRAPE)

ARA Type: **AMENDMENT 02**

ARA Number: FA8650-18-S-5008

THIS WILL BE A TWO-STEP SOLICITATION:

First Step: WHITE PAPER DUE DATE AND TIME: This ARA is open and effective from 3 May 2018 until 2 May 2023. White Papers will be considered if received any time prior to 2 May 2023 at 3:00 p.m. Wright-Patterson AFB, OH 3:00 p.m. local time. **Please do not send white papers prior to 3 May 2018. Whitepapers may be submitted electronically to the Contracting POC.**

Second Step: PROPOSAL DUE DATE AND TIME: To be provided in the Requests for Proposals sent to offerors that submit White Papers considered to meet the needs of the Air Force.

NOTE: Any white paper or proposal received at the Government Office designated in this ARA after the exact time specified for receipt of offers is "late" and will not be considered except at the Contracting Point of Contract's discretion. It should be noted that this installation observes strict security procedures to enter the facility. These security procedures are NOT considered an interruption of normal Government processes, and proposals received after the above stated date and time as a result of security delays will be considered "late." Furthermore, note that if offerors utilize commercial carriers in the delivery of proposals, they may not honor time-of-day delivery guarantees on military installations. Be advised, if the U.S. Postal Service is used, this building only receives U.S. Postal Mail twice a week and delivery by that means may not meet the proposal due date and time established herein. Early white paper/proposal submission is encouraged.

Submission: White Papers must be submitted via e-mail to the Contracting Point of Contact (POC): Whitney Foxbower, Contracting Officer, AFRL/RQKMS, Bldg 45, 2130 8th St., Wright-Patterson AFB, OH 45433-7541.

Annual Updates: It is noted that for ease of reference this ARA will be republished at yearly intervals for updates.

Solicitation Request: Air Force Research Laboratory, AFRL/RX Materials and Manufacturing Directorate, Wright-Patterson Air Force Base is soliciting white papers on the research effort described below.

Type of Contract/Instrument: The Air Force reserves the right to award Contract(s) and/or Other Transaction(s) pursuant to 10 U.S.C. 2373, based on the instrument deemed most appropriate. It is anticipated that awards under this ARA will generally be Cost Plus Fixed Fee (CPFF) 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.
NOTE: If proposing a Federal Acquisition Regulation (FAR) based contract, the FAR clause references in this AFA shall apply. This announcement incorporates FAR and supplement provisions and clauses by reference. The full text of these provisions and clauses can be found at http://farsite.hill.af.mil/.
If proposing an Other Transaction (OT) pursuant to 10 U.S.C. 2373, these FAR references and clauses would not apply. The terms and conditions of an OT agreement should be developed and negotiated on a case-by-case basis.

Estimated Program Cost: The total estimated program value is $49,000,000 with multiple awards ranging from $100,000.00 to $5,000,000.00 (the Government reserves the right to exceed this amount if necessary).

Anticipated Number of Awards: The Air Force anticipates awarding multiple awards for this announcement. However, the Air Force reserves the right to award zero, one, or more agreements and/or contracts, for all, some or none of the solicited effort based on the offeror's ability to perform desired work and funding fluctuations. There is no limit on the number of agreements or contracts that may be awarded to an individual offeror.

Brief Program Summary: Air Force Research Laboratory, Materials & Manufacturing Directorate is soliciting white papers and potentially technical and cost proposals under this announcement that support the needs of the Advanced Power Technology Office (APTO).

APTO has a need to improve the U.S. Air Force's energy security posture through rapid assessment of energy and environmental technologies. This effort is needed to maximize the benefit of a combination of increased energy resiliency/reliability where energy resilience is defined as the agility to maintain critical mission functions even during unexpected disruptions, increased cost–effectiveness to

evaluate the trade-offs between lowest price and other priorities such as sustainability and resilience, and increased environmental sustainability.

This will be addressed through ideas to execute and maintain a strong, sustainability - driven Research Development Test and Evaluation (RDT&E) for Air Force installations; ~~industrial process energy~~; manned and unmanned aviation systems; expeditionary energy technology, advanced ground support technologies; and environmentally safe technology.

Communication Between Prospective Offerors and Government Representatives: Dialogue between prospective offerors and Government representatives is encouraged until submission of proposals. Discussions with any of the points of contact shall not constitute a commitment by the Government to subsequently fund or award any proposed effort. No guidance related to technical approach will be given. However, questions related to the objectives of the effort or prior similar efforts may be answered. Only Contracting Officers are legally authorized to commit the Government. If there is any doubt as to whether a response provides a competitive advantage, the answer will be posted publicly via an amendment to this ARA on FedBizOpps for all contractors to review. For those white papers not selected to provide a full proposal, notification and feedback will be managed by the Contracting POCs.

Address technical questions to the Technical POC: Albert Boulter, 2179 12th St, WPAFB, OH 45433-7718, (937) 656-5709, albert.boulter@us.af.mil

Address contracting questions to the Contracting POC: Whitney Foxbower, Contracting Officer, phone number: (937) 713-9877, e-mail address: whitney.foxbower@us.af.mil

System for Award Management (SAM) Registration: SAM is the primary Government repository for prospective federal awardee information and the centralized Government system for awards. It replaces CCR/FedReg, On-line Representations and Certifications (ORCA) and the Excluded Parties Lists System (EPLS). Offerors shall be registered in the KSAM database prior to submitting an invoice and through final payment of any award resulting from this ARA. Offerors may obtain information on registration and annual confirmation requirements via the SAM accessed through https://www.acquisition.gov or by calling 866-606-8220.

Full Text Announcement

I. **Program Description**: Air Force Research Laboratory, Materials and Manufacturing Directorate, Systems Support Division, Acquisition Systems Support Branch (AFRL/RXSC) is soliciting white papers (and later technical and cost proposals if after the Government's review of the white paper it is determined that the white paper has the potential to best meet the Air Force's needs) on the following research effort:

1. **Statement of Objective / Description of Technical Area(s):** The purpose of the ARA is to research and explore alternative energy, energy efficient, and environmentally safe technologies to provide increased capabilities and benefits to AF installations, equipment, and aircraft. This program shall identify new and emerging advanced power generation and energy efficient technologies to be further developed and transitioned to meet military needs across the Air Force. Emphasis will be on alternative energy, energy efficient, and environmentally safe technologies that provide cost reductions, reliability improvements, and enhancements to the performance of Air Force (AF) Aviation, ~~Industrial Process~~, Expeditionary, Installation, and Ground Support missions. **Please note the Industrial Energy technology paragraph of the SOO has been deleted and combined with Installation Energy.** Technology maturity at the system/subsystem model or prototype demonstration in a relevant environment (Technology Readiness Level 6) is preferred. Descriptors of Materials and Manufacturing Directorate technology interests are presented below in the context of alternative energy and applications which focus on enabling innovative solutions, methods and understanding in the development and application of new materials devices and concepts to meet specific performance goals. The following research areas are of interest.

   a. **Aviation Energy:** Aviation systems technology demonstrations focused on the improvement of efficiency and flexibility of AF aircraft in order to reduce fuel consumption, improve fuels compatibility, and expand mission capabilities. Examples of fuel efficiencies and flexibility include the incorporation of lightweight materials and materials optimization, drag reduction, propulsion system improvements, procedural changes, advanced batteries and fuel cells, component reconfiguration, software modifications, new aircraft equipment, and aircraft monitoring equipment that captures key aircraft data for operational energy assessments. Mission capability enhancements are typically realized as side benefits to fuel efficiency and flexibility improvements, and while important to transition, should be secondary to operational energy improvements. Mission capabilities can be expanded in several ways: increasing aircraft time on station or loiter, improving range, improving endurance, increasing cargo carrying capacity or speed of loading cargo, and improving mission planning/execution. Examples of past efforts include:

C-5 Composite Ram Air Inlet, C-17 Microvanes, and Light Weight Cargo Tie Downs.

b. **Industrial Energy**: Industrial Energy is deleted as a separate research area and combined with Installation Energy.

c. **Expeditionary Energy:** Expeditionary Energy and Water technology demonstrations supporting emerging or dual use technologies, systems or components that support warfighter operational self-sufficiency in resource poor, inhospitable and austere world-wide operations. If required, sustainable energy resources are preferred. The technologies shall target reducing critical operational energy generation, water, logistical and operational footprints (and associated wastes) for mobile warrior units at remote campsites arriving via foot or air lift or applicable to small remote, austere long duration/semi-permanent or fixed radar sites contributing to self-sufficiency in extreme climate locations. Emerging technologies should exhibit dual use applications suitable for disaster response or remote off-grid sites. Potential technologies proposed shall address AF expeditionary (as defined above) operational requirements. Examples of past efforts include: Forward Operating Base (FOB) of the Future, Smart Controls for Environment Control Unit (ECU) Maximum Energy Savings, and Energy Alternatives for Remote Radar Sites (EARRS).

d. **Installation Energy:** Advanced technology demonstrations that provide AF installations or Forward Operating Bases with energy assurance and energy resilience. These technologies must increase installation mission readiness by ensuring power is available, being used efficiently, physically secure, cyber secure, and/or can recover from incidents. Technologies typically associated with installation energy include microgrids, microgrid optimization, energy efficiency, distributed power generation, energy storage, autonomous load switching, smart controllers, infrastructure enhancements, datacenter improvements, modelling, monitoring, and communications. Can also include Industrial Energy as it relates to Installations.

e. **Ground Support Energy:** Advanced ground support energy technology and demonstrations seeking innovative industry solutions that improve energy efficiency, combat agility during CONUS and OCONUS operations, and operator health and safety conditions for: military flightline equipment, military flightline vehicles, and base mission support vehicles. Of particular interest is technologies and demonstrations that enable electrification of the flightline and associated equipment with full-electric or diesel-electric hybrid solutions. Examples of past efforts include: Next Generation Flightline, Vehicle to Grid, Security Forces Idle Reduction, and Bio Oil.

f. OPSEC: All contractors shall participate in all activities associated with the disciplines of the organization's Industrial Security, Information Security, Personnel Security, Operations Security (OPSEC), Antiterrorism, and Program Protection programs, following appropriate measures in each program as required for this particular contract. These are required in an effort to reduce program vulnerability from successful adversary collection, exploitation of critical information, and violations of export control requirements. The prime contractor will ensure that all subcontractors, if required, conform to these requirements as required by the prime contractor. Guidance can be provided by AFRL/RX Security as needed.

2. **Within Scope Modifications:** Potential offerors are advised that due to the inherent uncertainty of research and development efforts, awards resulting from this announcement may be modified during performance to make within scope changes, to include but not limited to, modifications which increase overall contract ceiling amount.
3. **Deliverable Items:**
   a. Data items, DD Form 1423-1 CDRLs will be utilized on contract awards. Other Transactions will specify data items on a case-by-case basis.
   b. Software: Software deliverables to be determined (TBD) based on proposal, if applicable.
   c. Hardware: Hardware deliverables to be determined (TBD) based on proposal, if applicable.
   d. Other: To be determined for each award.
4. **Schedule**: Each award is anticipated to be between 12 to 24 months; however Period of Performance will be tailored to each award.
5. **Other Requirements:**
   a. Program security classification: Classification will be determined for each award. If a DD254 is applicable, offerors must verify their Cognizant Security Office information is current with Defense Security Service (DSS) at www.dss.mil.
   b. OPSEC: see Statement of Objectives.
   c. Export Control: Information involved in this research effort maybe subject to Export Control (International Traffic in Arms Regulation (ITAR) 22 CFR 120-131, or Export Administration Regulations (EAR) 15 CFR 710-774). If effort may be subject to export control, then a Certified DD Form 2345, Militarily Critical Technical Data Agreement, will be required to be submitted with proposal.
   d. Export-Controlled Items: As prescribed by DFARS 225.7901-4, DFARS 252.225-7048, "Export-Controlled Item (JUN 2013)" is contained in this solicitation. This clause shall be contained in ALL resulting contracts.
   e. Safety: The following safety requirements will be incorporated into the award: Must comply with all Air Force, federal, state and local safety and environmental regulations. Must comply with system safety requirements

contained in MIL-STD 882E, Section 4 “Other Requirements” for any deliverable systems or hardware.

f. Contractor Performance Assessment Reporting System (CPARS) may apply to contract awards resulting from this BAA. Interim and final evaluations of contractor performance for contract awards will be prepared in accordance with AFFARS 5342.1503. The final performance evaluation will be prepared at the time of completion of work. In addition to the final evaluation, interim evaluation(s) will be prepared annually. Awardees will be requested to provide a POC to receive notifications of the opportunity to provide feedback. The contractor will be permitted 14 days to review the document and to submit additional information or a rebutting statement. If agreement cannot be reached between the parties, the matter will be referred to an individual one level above the Contracting Officer, whose decision will be final. Copies of the assessments, contractor responses, and review comments, if any, will be retained as part of the contract file, and may be used to support future award decisions for other procurements.

6. **Other Information:**

a. Government Furnished Property (GFP) Availability: to be determined for each award. Access to appropriate government facilities and platforms will be provided by the government as appropriate and necessary to conduct experimentation. Additional GFP use may be considered if proposed and found to be in the best interest of the Government.

In accordance with FAR 45.201(b), the contractor is responsible for all costs related to making the property available for use, such as payment of all transportation, installation or rehabilitation costs.

If GFP is requested in a proposal, the following clauses/provisions apply:

i. FAR 52.245-1 Government Property or FAR 52.245-1, Alt II if the resulting contract is with a nonprofit organization or applied research at nonprofit organizations (Apr 2012);
ii. FAR 52.245-9 Use and Charges (Apr 2012);
iii. DFARS 252.211-7007, Reporting of Government Furnished Property (Aug 2012);
iv. DFARS 252.211-7007, Tagging, Labeling and Marking of Government Furnished Property (Apr 2012);
v. DFARS 252.245-7002, Reporting Loss of Government Property (Apr 2012);
vi. DFARS 252.245-7003, Contractor Property Management System Administration (Apr 2012);
vii. DFARS 252.245-7004, Reporting, Reutilization, and Disposal (May 2013).

b. Base Support/Network Access: Base Support/Network Access will be determined for each contract/agreement. If contractor determines use of available base support to be in their best interest, it must be included as such in the white paper and proposal. Use of available base support will not be assumed during technical evaluation unless proposed. If it is

determined to apply, language will be in the SOW supplemental Requirements Document.

c. Data Rights Desired:

(1) Technical Data: Unlimited Rights

(2) Non-Commercial Software (NCS): Unlimited Rights

(3) NCS Documentation: Unlimited Rights

(4) Commercial Computer Software Rights: Customary License

The Air Force Research Laboratory is engaged in the discovery, development, and integration of warfighting technologies for our air, space, and cyberspace forces. As such, rights in technical data and NCS developed or delivered under this contract are of significant concern to the Government. The Government will therefore carefully consider any restrictions on the use of technical data, NCS, and NCS documentation which could result in transition difficulty or less-than full and open competition for subsequent development of this technology.

In exchange for paying for development of the data, the Government expects technical data, NCS, and NCS documentation developed entirely at Government expense to be delivered with Unlimited Rights.

Technical data, NCS, and NCS documentation developed with mixed funding are expected to be delivered with at least Government Purpose Rights. Offers that propose delivery of technical data, NCS, or NCS documentation subject to Government Purpose Rights should fully explain how the data was developed at private expense. Specifically, offers must explain what technical data, NCS, or NCS documentation developed with costs charged to indirect cost pools and/or costs not allocated to a Government contract will be incorporated, how the incorporation will benefit the program, and address whether those portions or processes are segregable.

Offerors that propose delivery of technical data, NCS, or NCS documentation subject to Limited Rights, Restricted Rights, or Specifically Negotiated License Rights will be considered. Proposals should fully explain what technical data, NCS, or NCS documentation developed with costs charged to indirect cost pools and/or costs not allocated to a Government contract will be incorporated and how the incorporation will benefit the program and whether those portions or processes are segregable.

Offerors shall include the data rights assertions as required by DFARS 252.227-7017, Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software. The assertions list is included in Section K and due at time of

proposals. Assertions must be completed with specificity. Each assertion must identify both the data and each such item, component, or process listed. Nonconforming assertions lists will be rejected.

Terms used in this section are defined in the clauses at 252.227-7013, Rights in Technical Data-Noncommercial Items, and 252.227-7014, Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation.

THIRD PARTY SOFTWARE (COMMERCIAL AND NONCOMMERCIAL):

DFARS 252.227-7014(d) describes requirements for incorporation of third party computer software. Any third party software (commercial and noncommercial) to be incorporated into a deliverable must be clearly identified in the proposal. Prior to delivery of any third party software, the contractor will obtain an appropriate license for the Government, and the written approval of the contracting officer.

Any third party software to be delivered to the Government that are not reasonably identifiable at proposal submission, must still be approved by the contracting officer prior to incorporation into a system deliverable. This obligation to obtain pre-approval by the contracting officer, as described above, continues throughout contract administration.

The Government will neither accept nor execute a DD Form 250 for the software deliverables until the Contractor obtains from all third party software suppliers and/or vendors (Licensor) licenses that comply with the following terms and conditions for the Government (Licensee):

1. The license shall not subject the Government to liability that is indefinite or indeterminate, such as an indemnification clause, as it would constitute an obligation in advance or in excess of an appropriation and violate the Anti-Deficiency Act.
2. The license shall not create a contingent liability for the Government. This includes, but is not limited to: unilateral price increases, automatic assessment of charges, and automatic renewal of the license.
3. The license shall be governed by Federal Statutes, Case Law, and Federal Regulations, and shall not be subject to the laws or jurisdiction of any municipality, state, or foreign country.
4. The license shall not include non-substitution language that would preclude or limit the Government from using another vendor/reseller and/or product to fulfill Government requirements.

5. The license shall not comment on entitlement to attorney fees.
6. The Licensor shall not have the authority to unilaterally terminate the license. All remedies available shall be consistent with the Disputes Clause in the underlying basic contract.
7. The Licensor shall not have the right to enter the premise or monitor the networks of Licensee for the purpose of auditing the use of the license.
8. The Licensor shall not use any injunctive relief clauses as the Licensor cannot prevent the Licensee from performing mission operations.
9. The Licensor shall not have the authority to control any litigation between a third party and the Licensee.
10. The Licensor shall not use the fact that the Licensee is using the Licensor's products in any notification to the public (e.g., no publicity rights permitted).

II. Award Information

1. **Anticipated Award Date:** Award dates will vary. White papers will be accepted for review through 2 May 2023.

2. **Anticipated funding** for the program (not per contract/agreement)

FY17	FY18	FY19	FY20	FY21	FY22
$.5M	$8.5M	$10M	$10M	$10M	$10M

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.

III. Eligibility Information

1. **Eligible Offeror**: This is an unrestricted solicitation. Businesses of all sizes are encouraged to propose on all or any part of this solicitation.
2. **Cost Sharing or Matching**: Cost Sharing is not required.
3. **Federally Funded Research and Development Centers**: The following guidance is provided for Federally Funded Research and Development Centers (FFRDCs) contemplating submitting a proposal, as either a prime or subcontractor. FAR 35.017-1(c) (4) prohibits an FFRDC from competing with any non-FFRDC concern in response to a Federal agency request for proposal

for other than the operation of an FFRDC (with exceptions stated in DFARS 235.017-1(c) (4)). There is no regulation prohibiting an FFRDC from responding to a solicitation. However, the FFRDC's sponsoring agency must first make a determination that the effort being proposed falls within the purpose, mission, general scope of effort, or special competency of the FFRDC, and that determination must be included in the FFRDC's proposal. In addition, APTO must make a determination that the work proposed would not place the FFRDC in direct competition with domestic private industry. Only after these determinations are made, would a determination be made concerning the FFRDC's eligibility to receive an award.

4. **Government Agencies**: If a Government agency is interested in performing work, contact the Program Manager identified in the ARA. If those discussions result in a mutual interest to pursue your agency's participation, the effort will be pursued independent of this announcement.
5. **Other:**
   a. Foreign Participation: Foreign Participation is not authorized. Foreign Nationals (FNs) can be employed by the US Prime Contractor of Sub-Contractor; however, FNs will be limited to Public Domain Information unless the contractor has obtained the proper license or Technical Assistance Agreement that authorizes disclosure of CMI and/or CUI to foreign entities pursuant to the Department of State's ITAR or Department of Commerce's EAR. Public Domain information is defined as information that is releasable to the general public and sometimes referred to as open source material. Examples include but are not limited to newspapers, magazines and information posted on the internet. Any proprietary information will have to be appropriately protected.
   b. This acquisition involves data that are subject to export control laws and regulations. Only contractors who are registered and certified with the Defense Logistics Services Center (DLSC) and have a legitimate business purpose may participate in this solicitation. Contact the Defense Logistics Services Center, 74 Washington Avenue N., Battle Creek, Michigan 40917-3084 (1-800-352-3572) for further information on the certification process. You must submit a copy of your approved DD Form 2345, Militarily Critical Technical Data Agreement, with your proposal.
   c. There are no limits on the number of white papers an offeror may submit.
   d. You may be ineligible for award if all requirements of this solicitation are not met on the white paper (and later proposal) due date as identified above.

IV. White Paper / Proposal and Submission Information

1. **Overview**: This Announcement consists of a Two-Step Process described in detail below. White Papers/Proposals submitted shall be in accordance with this announcement. *There will be no other solicitation issued in regard to this requirement.* The Government intends to review white papers/proposals and award some, all, or none of the proposals received without

negotiation/discussion; however, the Government reserves the right to negotiate with those offeror(s) whose proposal is selected for funding.

ONLY WHITE PAPERS ARE BEING SOLICITED INITIALLY. WHITE PAPERS WILL BE ACCEPTED FROM 3 MAY 2018 TO 2 MAY 2023.

Offerors should be alert for any ARA amendments that may permit extensions to the white paper submission date.

2. **First Step (White Paper) Instructions**:
   a. General: The *FIRST STEP* requests a white paper and a rough order of magnitude (ROM) cost. The white paper shall include a discussion of the nature and scope of the research and the offeror's proposed technical approach. The Government will review the white papers in accordance with the FIRST STEP Peer or Scientific Review criteria, set forth in Section V below. Based on this review, the Government will determine which of them have the potential to best meet the Air Force's needs. Offerors will be notified of the disposition of their white paper. It is anticipated that Government review of the white papers submitted will take 30 working days. Those offerors submitting white papers assessed as meeting Air Force needs will be asked to submit a technical and cost proposal. Those offerors not requested to submit a technical and cost proposal will be notified but may, however, still elect to submit a technical and cost proposal. An offeror submitting a proposal without first submitting a white paper **will not** be eligible for an award. The cost of preparing white papers in response to this Solicitation is not considered an allowable direct charge to any resulting or any other contract; however, it may be an allowable expense to the normal bid and proposal indirect cost as specified in FAR 31.205-18.
   b. Page Limitation: The White Paper shall be limited to 6 pages prepared and submitted in Word format. Font shall be standard 10-point business font Arial. Character spacing must be "normal," not condensed in any manner. Pages shall be double-spaced (must use standard double-space function in Microsoft Word), double-sided (each side counts as one page), 8.5 by 11 inches, with at least one-inch margins on both sides, top and bottom. All text, including text in tables and charts, must adhere to all font size and line spacing requirements listed herein. Font and line spacing requirements do not have to be followed for illustrations, flowcharts, drawings, and diagrams. These exceptions shall not be used to circumvent formatting requirements and page count limitations by including lengthy narratives in such items. Pages shall be numbered starting with the cover page being Page 1, and the last page being no greater than Page 6. The page limitation covers all information including indices, photographs, foldouts (counted as 1 page for each 8.5 by 11 portion) tables, charts, appendices, attachments, resumes, etc. The Government will not consider pages in excess of these limitations.

Offerors should submit their white paper via email in WORD format to the Contracting POC.

c. Format: The white paper will be formatted as follows:

(1) Section A: ARA Number (FA8650-18-S-5008), Title of Program (Government Requirement for Advanced Power and Energy (GRAPE)), Title of your white paper along with which technology area it fits under (Installation Readiness Energy, ~~Industrial Process Energy~~, Expeditionary Energy, Ground Support Energy or Aviation Energy), Name of Company, Business Size, Company's Commercial and Government Entity (CAGE) number, Dun & Bradstreet (D&B) Data Universal Numbering System (DUNS) number, Contracting POC and Technical POC with appropriate telephone numbers, fax numbers, and email addresses for the POCs. Add the following information;

(2) Section B: Period of Performance and Task Objectives;

(3) Section C: Technical Summary and Proposed Deliverables (if any); and

(4) Section D: Cost of Task (Rough Order of Magnitude (ROM)).

d. Technical Portion: The technical portion of the white paper shall include a discussion of the nature and scope of the research and the offeror's proposed technical approach/solution. The offeror shall explicitly describe the innovative nature of the research. It may also include any proposed deliverables. Resumes, descriptions of facilities and equipment, a proposed Statement of Work are not required at this point.

e. Cost Portion: The cost portion of the white paper shall include a ROM cost estimate. No detailed price or cost support information should be forwarded; only a time-phased bottom line figure should be provided.

f. Other Information: Multiple white papers within the purview of this announcement may be submitted by each offeror. If the offeror wishes to restrict its white papers, they must be marked with the restrictive language stated in FAR 52.215-1(e).

g. White Paper/Proposal Content Summary: You may be ineligible for award if all requirements of this solicitation are not met on the proposal due date.

3. **Second Step (Proposal) Instructions**:

a. **General Instructions**:

(1) The *SECOND STEP* consists of offerors submitting a technical and cost proposal within 30 working days of the proposal request. After receipt, proposals will be reviewed in accordance with the award criteria in Section V. below. Proposals will be categorized and subsequently selected for negotiations.

(2) Technical/management and cost/business volumes should be submitted in separate volumes and must be valid for 180 days.

(3) Proposals must reference the announcement number FA8650-18-S-5008 and relevant research area(s).

(4) Offerors must submit one-original and 1 hard copies of their proposals to the Contracting POC.

(5) Offerors must include 1 CD in Microsoft Office or Adobe format containing all electronic versions of required submittals. All electronic versions must match the hard copies.

a) The cost file(s) spreadsheets must be in Microsoft Excel and include the formulas for calculating cost element bases (i.e., G&A, O/H, etc.)

b) The CDs should be labeled with the company name and proposal title.

(6) Offerors are advised that only Contracting Officers are legally authorized to contractually bind or otherwise commit the Government.

(7) The cost of preparing proposals in response to this ARA is not considered an allowable direct charge to any resulting or any other contract; however, it may be an allowable expense to the normal bid and proposal indirect cost as specified in FAR 31.205-18.

(8) No classified technical proposals or cost volumes are expected. Offerors are encouraged to keep all elements of the proposal package unclassified. In the rare case where an offeror has a need to submit a classified appendix, please contact the technical POC for delivery instructions.

b. **Technical/Management Proposal**:

(1) Page Limitations: The following describes proposal page limitations:

a) The Technical/Management Proposal shall be limited to 20 pages. Technical/Management proposals and Statements of Work must be provided in Microsoft Word. Signed pages may be submitted in Adobe.

b) Font shall be standard 10-point business font Arial.

c) Character spacing must be “normal,” not condensed in any manner.

d) Pages shall be double-spaced (must use standard double-space function in Microsoft Word), double sided (each side counts as one page), 8.5 by 11 inches, with at least one-inch margins on both sides, top and bottom.

e) All text, including text in tables and charts, must adhere to all font size and line spacing requirements listed herein. Font and line spacing requirements do not have to be followed for illustrations, flowcharts, drawings, and diagrams. These exceptions shall not be used to circumvent formatting requirements and page count limitations by including lengthy narratives in such items.

f) Pages shall be numbered starting with the cover page being Page 1, and the last page being no greater than Page 20. The page

limitation covers all information including indices, photographs, foldouts (counted as 1 page for each 8.5 by 11 portion) tables, charts, appendices, attachments, resumes, etc.

g) The proposal page limit does not include the offeror's proposed Statement of Work (SOW); however, the same formatting rules apply to the SOW, which is limited to 10 pages.

h) **Please Note: The Government will check the proposal and SOW for conformance to the stated requirements. Any pages in excess of the stated page limitation after the format check will not be considered for review purposes.**

(2) The Technical/Management proposal(s) shall include a discussion of the nature and scope of the research and the technical approach. Additional information on prior work in this area, descriptions of available equipment, use of base support (if desired), data and facilities and resumes of personnel who will be participating in this effort should also be included as attachments to the technical proposal. This volume(s) shall include a SOW(s) detailing the technical tasks proposed to be accomplished under the proposed effort and suitable for contract incorporation. ***Do not include any proprietary information in the SOW.*** In addition to the contractor proposed SOW, a Government generated SOW attachment containing additional contracting requirements will be included in any resulting contracts.

(3) Any questions concerning the technical proposal or SOW preparation shall be referred to the Contracting POC.

d. **Cost/Business Proposal**:

(1) Separate the proposal into a business section and cost section.

a) The business section should contain all business aspects to the proposed contract, such as type of contract, any exceptions to terms and conditions of the announcement, any information not technically related, etc. Provide rationale for exceptions.

b) Identify any technical data that will be delivered with less than unlimited rights.

c) Subcontracting Plans: For efforts to exceed $700,000, Subcontracting Plans shall be submitted in the cost/business proposal. Reference FAR 19.704, DFARS 219.704, and AFFARS 5319.704(a) (1) for subcontracting plan requirements. Small business concerns are exempt from this requirement.

d) Limitations on Pass-Through Charges: As prescribed in FAR 15.408(n)(1) & 15.408(n)(2), provisions 52.215-22, "Limitations on Pass Through Charges- Identification of Subcontract Effort (Oct 2009)," apply.

e) Completed Certifications and Representations are due with the proposal. Offerors may also be required to submit updated or

supplemental Certifications and Representations based on the specifics of their proposal.

f) If an offeror proposes the use of Government Furnished Property (GFP), other than GFP identified in the ARA, the offer must specifically identify each piece of GFP in the Cost/Business Proposal and propose and substantiate a rental cost for evaluation purposes in accordance with FAR 45.202. Include the following information in the proposal:

(i) A list describing all Government property that the offeror or its subcontractors propose to use on a rent-free basis. The list shall identify the accountable contract under which the property is held and the authorization for its use (from the contracting officer having cognizance of the property);
(ii) The dates during which the property will be used and, for any property that will be used concurrently in performing two or more contracts, the amounts of the respective uses in sufficient detail to support prorating the rent;
(iii) The amount of rent that would otherwise be charged in accordance with FAR 52.245-9, Use and Charges; and
(iv) The voluntary consensus standard or industry leading practices and standards to be used in the management of Government property, or existing property management plans, methods, practices, or procedures for accounting for property.

(2) **Cost Element Breakdown:** Clear, concise, and accurate cost proposals reflect the offeror's financial plan for accomplishing the effort contained in the technical proposal. As a part of its cost proposal, the offeror shall submit the information outlined below, together with supporting breakdowns. All direct costs (labor, material, travel, computer, etc.) as well as labor and overhead rates should be provided by contractor fiscal year (CFY). Detailed cost element breakdowns by Government Fiscal Year or calendar year are not required. The supporting schedules may include summary level estimating rationale used to generate the proposed costs. The cost element breakdown(s) should include the following if applicable.

a) **Direct Labor**: Direct labor should be detailed by number of labor hours by category of labor.

b) **Labor and Overhead Rates**: Direct labor hours, with their applicable rates, must be broken out and the bases used clearly identified. The source of labor and overhead rates and all pricing factors should be identified. For instance, if a Forward Pricing Rate Agreement (FPRA) is in existence, that should be noted, along with the Administrative Contracting Officer's (ACO's) name and telephone number. If the rates are based on current experience in your organization, provide the historical base used and clearly identify all escalation, by year, applied to derive the proposed

rates. If computer usage is determined by a rate, identify the basis used and rationale used to derive the rate.

c) **Material/Equipment:** List all material/equipment items by type and kind with associated costs and advise if the costs are based on vendor quotes, data and/or engineering estimates; provide copies of vendor quotes and/or catalog pricing data.

d) **Subcontractor Costs**: Submit all subcontractor proposals and analyses with your cost proposal (See FAR 15.404-3(b)). If the subcontractor will not submit cost and pricing information to the offeror, this information must be submitted directly to the Government for analysis. On all subcontracts and interdivisional transfers, provide the method of selection used to determine the subcontractor and the proposed contract type of each subcontract. An explanation shall be provided if the offeror proposes a different amount than that quoted by the subcontractor. The offeror's proposal must:

(i) Identify principal items/services to be subcontracted.

(ii) Identify prospective subcontractors and the basis on which they were selected. If non-competitive, provide selected source justification.

(iii) Identify the type of contractual business arrangement contemplated for the subcontract and provide rationale

(iv) Identify the basis for the subcontract costs (e.g., firm quote or engineering estimate, etc.).

(v) Identify the cost or pricing data submitted by the subcontractor.

(vi) Provide an analysis of the proposed subcontract in accordance with FAR 15.404-3(b). Provide an analysis concerning the reasonableness, realism and completeness of each subcontractor's proposal. If the analysis is based on comparison with prior prices, identify the basis on which the prior prices were determined to be reasonable. The analysis should include, but not be limited to, an analysis of: materials, labor, travel, other direct costs and proposed profit or fee rates.

e) **Special Tooling or Test Equipment:** When special tooling, and/or test equipment is proposed, attach a brief description of items and indicate if they are solely for the performance of this particular contract or project and if they are or are not already available in the offeror's existing facilities. Indicate quantities, unit prices, whether items are to be purchased or fabricated, whether items are of a severable nature and the basis of the price. These items may be included under Direct Material in the summary format.

f) **Consultants:** When consultants are proposed to be used in the performance of the contract, indicate the specific project or area in

which such services are to be used. Identify each consultant, number of hours or days to be used and the consultant's rate per hour or day. State the basis of said rate and give your analysis of the acceptability of the consultant's rate.

g) **Travel:** Travel costs must be justified and related to the needs of the project. Identify the number of trips, the destination and purpose. Travel costs should be broken out by trip with number of travelers, airfare, per diem, lodging, etc.

h) **Computer Use:** Detail the amount and kind of computer usage, the cost, and how the costs were derived.

i) **Facilities Capital Cost of Money:** If Facilities Capital Cost of Money is proposed, a properly executed DD Form 1861 is required.

j) **Project Funding Profile:** Offerors should include a project funding profile by Government Fiscal Year (GFY) (1 Oct through 30 Sept) for budgetary purposes. This will enable the Government to easily identify program funding needs by GFY.

k) If an offeror takes exceptions to the requirements called out in the announcement (e.g., base support, Government-furnished property (GFP), CDRLs), the exceptions should be clearly stated in the cost proposal.

l) **Forward Pricing Rate Agreements:** Offerors who have forward pricing rate agreements (FPRA's) and forward pricing rate recommendations (FPRR's) should submit them with their proposal.

m) Cost/Business proposals have no page limitations.

d. **Proposal Content Summary**: You may be ineligible for award if all requirements of this solicitation are not met on the proposal due date.

V. White Paper / Proposal Review Information

1. **FIRST STEP – White Paper Peer or Scientific Review Criteria:** The Government will review White Papers to determine which of them have the potential to best meet the Air Force's needs based on the following criteria, which are listed in **equal** order of importance:

   a. Is the technical approach consistent with the technologies listed in the ARA?
   b. Is the research of interest to the Government?
   c. Is appropriate funding available?

2. **SECOND STEP – Proposal Peer or Scientific Review Criteria**: Proposals will be reviewed against the criteria listed below. The technical aspect, which is ranked as the first order of priority, shall be reviewed based on the following criteria that are of **equal** order of importance.

   a. **Technical**:

(1) Unique and innovative approach proposed to accomplish the technical objectives. New and creative solutions and/or advances in knowledge, understanding, technology, and the state of the art.

(2) The offeror's understanding of the scope of the technical effort.

(3) Soundness of the offeror's technical approach including whether the proposal identifies major technical risks, clearly defines feasible mitigation efforts, and demonstrates related experience and qualifications of technical personnel.

(4) The potential to transition the research and development deliverables to future Government needs. Any proposed restriction on technical data or computer software will be considered.

(5) Availability of qualified technical personnel and their experience with the applicable technologies.

(6) Availability, from any source, of necessary research, test, laboratory, or shop facilities.

b. **Cost/Price**: The cost/price criterion includes the realism of the proposed cost. Cost/Price is a substantial factor, but ranked as the second order of priority. (If an offeror proposes the use of GFP other than any GFP identified in this ARA, and that proposed GFP provides the offeror an unfair competitive advantage, then FAR 45.202 requires rental equivalent be applied to the Cost Factor for evaluation purposes only).

3. **SECOND STEP / PROPOSAL - Review and Selection Process**

a. **Categories**: Based on the Peer or Scientific Review, proposals will be categorized as Selectable or Not Selectable (see definitions below). The selection of one or more sources for award will be based on the Peer or Scientific Review, as well as importance to agency programs and funding availability.

(1) **Selectable:** Proposals are recommended for acceptance if sufficient funding is available

(2) **Not Selectable:** Even if sufficient funding existed, the proposal should not be funded.

Note: The Government reserves the right to award some, all, or none of proposals. When the Government elects to award only a part of a proposal, the selected part may be categorized as Selectable, though the proposal as a whole may not merit such a categorization.

b. No other criteria will be used.

c. Prior to award of a potentially successful offer, the Contracting Officer will make a determination regarding price reasonableness.

VI. Award Administration Information

1. **Award Notices**: Offerors will be notified whether their white paper is recommended to submit a full technical and cost proposal on or about 30 days after receipt of the white paper. 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.
2. **Administrative and National Policy Requirements**: See Section I.

3. **Reporting:** See ARA Paragraph I.3.a., Contract Data Requirements List (CDRL).

VII. Other Information

1. **Acquisition of Commercial Items:** Based upon market research, the Government is not using the policies contained in Part 12, Acquisition of Commercial Items, in this solicitation. However, interested offerors may identify to the Contracting Officer their interest and capability to satisfy the Government's requirement with a commercial item within 15 days of this notice.
2. **Support Contractors:** Only Government employees will participate in Peer or Scientific Reviews. Offerors are advised that employees of commercial firms under contract to the Government may be used to administratively process proposals, monitor contract performance, or perform other administrative duties requiring access to other contractors' proprietary information. These support contracts include nondisclosure agreements prohibiting their contractor employees from disclosing any information submitted by other contractors or using such information for any purpose other than that for which it was furnished.
3. **Item Unique Identification and Valuation.** It is DoD policy that contractors shall be required to identify the Government's unit acquisition cost for all deliverable end items for which Item Unique Identification applies. Therefore, proposals must clearly break out the unit acquisition cost for any deliverable items. See DFARS 211.274-3, Policy for Valuation, for more information. (Per DoD, "fully burdened unit costs" to the Government would include all direct, indirect, G&A costs, and an appropriate portion of fee). For more information, see the following website: http://www.acq.osd.mil/dpap/pdi/uid/index.html.
4. **Informal Feedback Sessions:** When requested, an informal feedback session will be provided. The process will follow the time guidelines outlined in the notification letter.
5. **Wide Area Work Flow:** NOTICE: Any contract award resulting from this solicitation will contain the clause at DFARS 252.232-7003, Electronic

Submission of Payment Requests and Receiving Reports (Jun 2012) which requires electronic submission of all payment requests. Any contract resulting from this solicitation will establish a requirement to use WAWF-RA for invoicing and receipt/acceptance, and provide coding instructions applicable to this contract via the clause at DFARS 252.232-7006, Wide Area Workflow Payment Instructions (May 2013). Contractors are encouraged to take advantage of available training (both web-based and through your local DCMA office), and to register in the WAWF-RA system. Information regarding WAWF-RA, including the web-based training and registration, can be found at https://wawf.eb.mil. Note: This WAWF-RA requirement does not apply to Universities that are audited by an agency other than DCAA.

6. **Forward Pricing Rate Agreements:** Offerors who have forward pricing rate agreements (FPRAs) and forward pricing rate recommendations (FPRR's) should submit them with their proposal.
7. **Pre-Award Clearance:** Pursuant to FAR 22.805, a preaward clearance must be obtained from the U.S. Department Of Labor, Employment Standards Administration, Office Of Federal Contract Compliance Program's (OFCCP) prior to award of a contract (or subcontract) of $10,000,000 or more unless the contractor is listed in OFCCP's National Preaward Registry https://ofccp.dol-esa.gov/preaward/pa_reg.html . Award may be delayed if you are not currently listed in the registry and the contracting officer must request a preaward clearance from the OFCCP.
8. **Limitations on Pass-Through Charges.** As prescribed in FAR 15.408(n)(1) & 15.408(n)(2), provisions 52.215-22, Limitations on Pass Through Charges – Identification of Subcontract Effort (OCT 2009), and 52.215-23, Limitations on Pass-Through Charges (OCT 2009), are contained in this solicitation by reference. Any contract valued greater than the threshold for cost or pricing data threshold, except fixed price contracts awarded on the basis of adequate price competition, resulting from this solicitation, shall contain the Clause at FAR 52.215-23 (or Alt I).
9. **Associate Contractor Agreements:** Associate Contractor Agreements (ACAs) are agreements between contractors working on Government contracts that specify requirements for them to share information, data, technical knowledge, expertise, or resources. The contracting officer may require ACAs when contractors working on separate government contracts must cooperate, share resources or otherwise jointly participate in working on contracts or projects. Prime contractor to subcontractor relationships do not constitute ACAs. For each award, the contracting officer will identify associate contractors with whom agreements are required.
10. **Post-Award Small Business Program Rerepresentation:** As prescribed in FAR 19.309(d), FAR Clause 52.219-28, Post-Award Small Business Program Rerepresentation (JUL 2013), is incorporated by reference in this solicitation. This clause will be contained in any contracts resulting from this solicitation. This clause requires a contractor to rerepresent its size status when certain conditions apply. The clause provides detail on when the rerepresentation must be complete and what the contractor must do when a **rerepresentation is required.**

11. **Employment Eligibility Verification:** As prescribed by FAR 22.1803, FAR Clause 52.222-54, Employment Eligibility Verification (AUG 2013), is hereby incorporated by reference in this solicitation. Any contract awarded as a result of this ARA that is above the Simplified Acquisition Threshold, and contains a period of performance greater than 120 days, shall include this clause in its contract. This clause provides the requirement of contractors to enroll as a Federal Contractor in the E-Verify program within 30 days after contract award.
12. **Reporting Executive Compensation and First-Tier Sub-contract/Sub-recipient Awards:** Any contract valued at $25,000 or more, excluding classified contracts or contractors with individuals, must contain FAR 52.204-10, Reporting Executive Compensation and First-Tier Subcontract Awards (JUL 2013).
13. **Updates of Publicly Available Information Regarding Responsibility Matters:** Any contract or assistance award that exceeds $550,000; and when offeror checked "has" in paragraph (b) of the provision FAR 52.209-7, shall contain the clause/article, FAR 52.209-9 "Updates of Publicly Available Information Regarding Responsibility Matters (JUL 2013)."
14. **Accelerated Payment to Small Business Subcontractors:** As prescribed in FAR 32.009-2, FAR 52.232-40, Providing Accelerated Payments to Small Business Subcontractors (DEC 2013), is hereby incorporated by reference.
15. **Terms of Service, Open-Ended Indemnification and Unenforceability of Unauthorized Obligations:** As prescribed in FAR 32.706-3, FAR 52.232-39, Unenforceability of Unauthorized Obligations (JUN 2013), is hereby incorporated by reference.
16. **Whistleblower Protections:** As prescribed in DFARS 203.970, DFARS 252.203-7002, Requirement to Inform Employees of Whistleblower Rights (SEP 2013), is hereby incorporated by reference.
17. **Contractor Business Systems:** DFARS 252.242-7005, Contractor Business Systems (FEB 2012), is hereby incorporated by reference.
18. **Safeguarding of Unclassified Controlled Technical Information**: As prescribed in DFARS 204.7303, DFARS 252.204-7012, Safeguarding of Unclassified Controlled Technical Information (NOV 2013), is hereby incorporated by reference.
19. **Ombudsman:** The Ombudsman clause, AFFARS 5352.201-9101 Ombudsman (NOV 2012) will be contained in any contracts or agreements resulting from a Call for Proposals. The AFRL Ombudsman is Lisette K. Leduc, Director of Contracting, AFRL/PK, (937) 904-4407, email: lisette.leduc@us.af.mil.
20. **Proposal Content Checklist:** You may be ineligible for award if all requirements of this solicitation are not met on the proposal due date.

    a. Proposals are due to the Contracting POC.

    b. Proposals are due no later than the due date and time specified in this announcement.

c.Proposal page limits are strictly enforced. See Section IV.3.b.of the solicitation for page limits.

d. If a contract is proposed, completed Certifications and Representations (Section K) are required. Certifications and Representations (Section K) can be found at www.sam.gov.

e. The Cost/Business Proposal must contain all information described in the Content and Form of Proposal Section.

f. For any subcontracts proposed, the Cost/Business Proposal must contain a subcontractor analysis IAW FAR 15.404-3(b).

g. Offerors other than small businesses are to include a subcontracting plan in Microsoft Word Readable Format on a CD ROM as well as a hard copy.

h. Proposals must be submitted in the format specified in Section IV.

i. Offerors who have Forward Pricing Rate Agreements (FPRA's) and Forward Pricing Rate Recommendations (FPRR's) should submit them with their proposal.

j. If a DD254 is applicable, offerors must verify their Cognizant Security Office information is current with Defense Security Service (DSS) at www.dss.mil.

k. Due to this effort being subject to export control, offerors must submit a Certified DD Form 2345, Militarily Critical Technical Data Agreement, with proposal.

Attachment 1

Supplemental Instructions for Assistance Instrument Proposals

a. Proposal Cover Page – SF 424 (R&R) Form: All proposals for assistance, whether submitted electronically or in hard copy must include an SF 424 (R&R) as the cover page. The SF 424 (R&R) should be downloaded from the "Application" box in the upper right hand corner of the synopsis page. Click on "download" under the column "Instructions and Application." Select "Download Application Package" and complete the SF 424 (R&R).

b. Certifications: All proposals for assistance whether submitted electronically or in hard copy must include the requisite certifications. To access the requisite Certifications, select the "Application" box in upper right hand corner of the synopsis page. Click on "Instructions and Application" and select "Download Application Instructions" to view the Certifications. To complete the Certifications you must check Block 18 of the SF 424 (R&R), and by signing it (either by pressing the "submit" button for Grants.gov or by hand if submitting it in hard copy), you are certifying that you have read and agree to abide by the terms in the Certifications. You do not need to submit any additional documentation unless you have lobbying activities to disclose on an SF –LLL.

d. If you are submitting an assistance instrument proposal, you may do so electronically through Grants.gov but you are not required to. *(The CO requests offerors submitting a proposal via Grants.gov to e-mail the CO when a proposal has been submitted.)*

e. Assistance Opportunity: Go to http://grants.gov/ to find the opportunity. Instructions are provided at http://www.grants.gov/web/grants/applicants/apply-for-grants.html