

**FUNDING OPPORTUNITY ANNOUNCEMENT (FOA) # FA8650-19-S-5010  
DEFENSE PRODUCTION ACT (DPA) TITLE III EXPANSION OF  
DOMESTIC PRODUCTION CAPABILITY AND CAPACITY  
MATERIALS & MANUFACTURING DIRECTORATE**

**CALL 001**

**"HIGH ENERGY DENSITY ALANE FUEL MANUFACTURING  
FOR DOD SYSTEMS PROJECT"**

**Overview Information**

**NAICS Code:** The NAICS Code for this acquisition is 339999 (All Other Miscellaneous Manufacturing), and the small business size standard is 1,500 employees.

**Federal Agency Name:** Air Force Research Laboratory, AFRL/RXKMT

**CALL Title:** High Energy Density Alane Fuel Manufacturing for DoD Systems Project

**Funding Opportunity Announcement (FOA) Type:** This is **CALL 001**

**Funding Opportunity Agency Announcement Number:** FA8650-19-S-5010

**THIS WILL BE A ONE-STEP SOLICITATION: FOA with Calls** - Refer to Funding Opportunity Announcement FA8650-19-S-5010 Section VII. FOA with Calls for more information regarding proposal submission information and proposal content and form. **Please note that any Roman Numeral Sections shown within this call references back to the FOA Announcement Section of same Roman Numeral.**

**Topic Area:** Commercialization of Research & Development (R&D) Investments (Efforts to transition Government sponsored R&D to commercial applications; and from commercial R&D to national defense applications)

**THE GOVERNMENT SUSPENDS WHITE PAPER SUBMISSIONS RELATED TO ALANE FUEL EFFECTIVE ON THE DATE AND TIME THAT THIS CALL IS POSTED. WHITE PAPER SUBMISSIONS TIED TO ALANE FUEL WILL NOT BE REVIEWED.**

**PROPOSAL DUE DATE AND TIME:** 04 Oct 2019, received prior to 12:00 PM Eastern Standard Time (45 days after Call release)

**PROPOSAL Submission:** Proposals must be submitted to the Contracting Point of Contact (POC): Sherrod D. Williams, AFRL/RXKMT, 2130 8<sup>th</sup> St., Bldg. 45, Wright-Patterson AFB, OH 45433-7541.

**Note:** Any proposal, modification or revision received at the Government Office designated in this FOA after the exact date and time specified for receipt of offers is "late" and will not be considered except at the Agreement Officer's (AO) 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 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 such means may not meet the proposal due date and time. Early proposal submission is encouraged. Proposals should be addressed to the Contracting Point of Contact (POC) stated in the Submission section.

**Type of Contract/Instrument:** The Government intends to utilize the Department of Defense Grant and Agreement Regulations (DoDGARs)-based Technology Investment Agreement (TIA) for any awards made off of this Call. However, the Government may consider award of a Cooperative Agreement in rare situations if it is a better fit for the requirement.

**Estimated Program Cost:** Total program cost \$8.0 million (\$4.0 million Government funding plus \$4.0 million recipient(s) cost share). Estimating up to two awards at approximately \$2.0 million Government share each. Program budget is subject to funding availability.

**Anticipated Number of Awards:** The Government anticipates making up to two awards estimated at approximately \$2 million each in Government Share for this Call. However, the Government reserves the right to make multiple awards, a single award, or no award based on technical solutions proposed and funding availability.

#### **Communication Between Prospective Offerors and Government**

**Representatives:** All exchanges with offerors after the Call is issued shall go through the Agreements Officer. After Call release, questions and answers may be posted if warranted.

Discussions with any of the points of contact shall not constitute a commitment by the Government to subsequently fund or award any proposed effort. Only Contracting/Grants/Agreements Officers are legally authorized to commit the Government.

The primary POCs throughout the acquisition process will be:

Agreements Negotiator – Mr. Sherrod Williams (AFRL/RXKMT)  
Agreements Officer – Ms. Sheila Titer (AFRL/RXKMT)

**Address technical questions to the Technical POC:**

Alan R. Taylor, Alane DPA Title III Program Program Manager, 2977 Hobson Way, Bldg. 653, Wright-Patterson AFB, OH 45433, (937) 904-4593, [alan.taylor.3@us.af.mil](mailto:alan.taylor.3@us.af.mil).

**Address contracting questions to the Agreements/Contracting POCs:**

Agreements Negotiator – Mr. Sherrod D. Williams, AFRL/RXKMT, 2130 8<sup>th</sup> St., Bldg. 45, Wright-Patterson AFB, OH 45433-7541, (937) 713-9886, [sherrod.williams.1@us.af.mil](mailto:sherrod.williams.1@us.af.mil).

Agreements Officer – Ms. Sheila Titer, AFRL/RXKMT, 2130 8<sup>th</sup> St., Bldg. 45, Wright-Patterson AFB, OH 45433-7541, (937) 713-9893, [sheila.titer@us.af.mil](mailto:sheila.titer@us.af.mil).

**CALL FULL TEXT ANNOUNCEMENT:****I. Program Description:****1. Topic Areas:**

The DPA Title III Program has derived three broad Topic Areas for potential projects. The Topic Areas are: Sustainment of Critical Production, Commercialization of Research and Development Investments, and Scaling of Emerging Technologies. This Call fits within the Topic Area expanded on below:

**b. Commercialization of Research and Development (R&D)**

**Investments:** Efforts to transition Government sponsored R&D to commercial applications; and from commercial R&D to national defense applications.

**Brief Project Summary:** The objective of this project is to establish domestic, economically viable, cost effective production capabilities for the manufacturing of aluminum hydride, also known as alane, for use with various fuel cell systems.

**Overview:**

This project aims to prove out the capability to produce alane at a small production representative scale and provide the Government information related to requirements for scaling up production.

- a. Develop plans for this effort including already existing equipment/facilities planned to be used and required purchases (new capital equipment and facility enhancement items)
- b. Establish a small functional, production-representative scale operation capable of manufacturing the specification grade alane

- c. Develop a rigorous cost analysis for this “small scale” of operation and identify an alane \$/kg estimated cost of the proposed 'scaled' plant (in kg/yr)
- d. Develop plans to reduce the costs associated with the raw materials required to produce alane, or processes that require less expensive raw materials
- e. Develop detailed plans for increasing production to meet forecasted market volumes at viable target fuel costs for operation of military and commercial applications
- f. Initial alane chemistries from multiple batches shall be tested at an independent lab that is approved by the government to ensure consistent production capability.

**2. Within Scope Modifications:** See FOA.

**3. Deliverable Items:** The following reporting requirements are applicable to this Call as defined in the FOA Appendix II Sample TIA:

<b>Deliverable Item</b>	<b>Submittal Requirement</b>
7.040 Final Report	3 months after conclusion of technical effort
7.050 Funds & Man-hour Expenditure Report	Quarterly
7.052 Contractor's Progress, Status & Mgt Report	Quarterly
7.054 Strategic Business Plan	6 months ARA*
7.055 Property Control List	Quarterly / As Required
7.057 Presentation Material	Quarterly / As Required
7.060 Marketing Plan	9 months ARA

\* After Receipt of Agreement or Award (ARA)

**4. Schedule/Period of Performance:** The Government estimates a Total Period of performance (POP) of 15 months for this Call. This timeframe consists of an estimated Technical Period of Performance (TPOP) of 12 months with three months allotted for generating the final report.

**5. Other Requirements:**

- a. **Program Security classification:** Unclassified.
- b. **OPSEC:** Standard requirement is included in the SOO for this Call
- c. **Export Control:** Information involved in this project **will** be subject to Export Control. Recipients shall comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 131, and the Export Administration Regulations (EAR), 15 CFR Parts 710 through 774, in the performance of this agreement. **Reference FOA Appendix II Sample TIA. As prescribed by Article 6.031, “Export-Controlled Data Restrictions” is contained in this solicitation. This article shall be contained in ALL resulting agreements.**

## 6. Other Information:

- a. **Government Furnished Property (GFP):** Not anticipated
- b. **Government Furnished Information and/or Software:** Not Anticipated
- c. **Base Support/Network Access:** Not anticipated
- d. **Data Rights Desired:**
  - (1) **Technical Data:** Government Purpose Rights desired. Recipients may bring IP to the individual projects
  - (2) **Non-Commercial Software (NCS):** Not Applicable (N/A)
  - (3) **NCS Documentation:** N/A
  - (4) **Commercial Computer Software Rights:** N/A
- e. **Human or Animal Subject Use:** Not anticipated
- f. **Hazardous Materials:** Not anticipated
- g. **Radioactive Materials:** Not anticipated
- h. **Ozone Depleting Substances:** Not anticipated
- i. **On-base Testing:** Not anticipated
- j. **Initial Safety Assessment:** Initial Safety Assessment for Government is considered low. Recipients must comply with all federal, state, and local safety and environmental regulations.
- k. **Military Equipment Valuation:** N/A
- l. **Recipient Acquired Property:** Anticipated – Acquired plant equipment will be tagged and maintained by the recipient with the expectation that the government may transfer the equipment to the recipient at some point during a potential no-cost monitoring phase.
- m. **Option(s):** No options are anticipated. Following the successful completion of an award under this Call, a follow-on effort may be competitively awarded amongst those that receive an award off this Call. The number of manufacturers to carry forward will be dependent on the results of this effort, funding and government requirements.
- n. **No Cost Monitoring Phase:** A no cost monitoring phase (NCMP) may be added after the end of the technical effort. A NCMP allows a continued partnership that provides the government with additional business, marketing, and business viability insight with the Recipient. At the end of a NCMP, if applicable, an equipment disposition strategy for any GFP and/or CAP will be developed and implemented. In this arrangement the Government may choose to transfer any, all, or no equipment for this effort, as needed to continue Recipient's viability as a Merchant Supplier. These aspects are described in Agreement Property Article 3.041, provided as FOA Appendix II Sample TIA.

## II. Award Information

- 1. **Anticipated Award Date:** The entire acquisition process will take approximately 165 calendar days, but the actual duration may vary.

2. **Anticipated funding:** *Funding 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.*
3. **Award:** The Government intends to award a DoDGARs agreement known as a TIA. TIAs are governed by the DoDGARs and 2 CFR 200. A sample TIA, along with other sample documents, is attached to the FOA. See Appendix II for the sample TIA. Any clarifications/exceptions to the TIA articles, as presented in the sample TIA, must be stated at the time of proposal submission. However, the Government may consider award of a Cooperative Agreement in rare situations if it is a better fit for the requirement.

### **III. Eligibility Information**

1. **Eligible Offeror:** See FOA.
2. **Proposed Cost Sharing or Matching:** See FOA.
3. **Other:**
  - a. Foreign participation: Per Defense Production Act of 1950, execution of the project requires a U.S. based company as lead. Foreign Participation is not allowed at a Prime Recipient level for this effort.

Foreign Nationals (FNs) can be employed by the U.S. Prime Recipient or Sub-awardee; however, FNs will be limited to Public Domain information unless the recipient has obtained the proper License of Technical Assistance Agreement that authorizes disclosure of CMI and/or CUI to foreign entities pursuant to the Department of State's International Traffic in Arms Regulations (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.

- b. Offerors may be ineligible for award if all requirements of the FOA and this Call are not met by proposal due date.

### **IV, V. and VI Sections: Not Applicable to Calls**

### **VII. FOA with Calls (One-Step Process)**

1. **Call Announcement Information (Also referred to as a Call):**

a. **Overview:** See FOA.

b. **Requirements:**

**Domestic Source Requirement:** The proposal submitter must provide proof of meeting the Domestic Source requirement IAW DPA Law or the proposal will not be reviewed.

2. **FOA with Calls (One-Step Process) Proposal Submission Information:**

a. **General Instructions:**

- (1) Offerors shall submit a technical and cost proposal within timeframe shown in **Proposal Due Date and Time Section**. After receipt, proposals will be evaluated in accordance with the award criteria stated below. Proposals will be categorized and potentially selected for negotiations. The Government intends to evaluate 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.
- (2) Proposals must reference the announcement number FA8650-19-S-5010; the Call, the relevant Topic Area shown in **Topic Area Section**; and, if applicable, the project title.

3. **FOA with Calls (One-Step Process) Proposal Content & Form:**

**Note:** Refer to Funding Opportunity Announcement FA8650-19-S-5010 Section VII. FOA with Calls for more information regarding proposal submission information and proposal content and form.

**a, b, d thru f: See FOA for Guidance**

**c. Domestic Source Proof:** Include proof of domestic source. This will not count toward the page limit.

**g. Technical/Management Proposal:**

**(1). Page Limitations:** The following describes the page limitations on the proposal submittal for this Call:

- i. Technical Discussion: up to 35 pages
- ii. Summary Business Plan: up to 25 pages

iii. Statement of Work: up to 10 pages (not included in tech proposal page count)

iv. **Tech Proposal Total:** up to 50 pages

**(2) thru (6), (8) & (9): See FOA**

**(7) Summary Business Plan:** See FOA

**Note:** The table of contents and cover page will not be included in the page count referenced above.

**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.

**h. Cost/Business Proposal: See FOA – Note change below:**

**(3) Cost proposals Page Limitations:** See FOA

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

## **VIII. FOA with Calls (One-Step Process) Proposal Review Information**

**Note: Offeror must provide proof of meeting the Domestic Source requirement IAW DPA Law or the proposal will not be reviewed.**

### **1. Proposal Evaluation Criteria:**

- a. See FOA.
- b. The selection of one or more sources for award will be based on an evaluation of the recipient's technical and cost proposals to determine the overall merit of the proposal in response to the Call, SOO and funding availability.
- c. The evaluation criteria are comprised of five factors ranked in descending order of importance:
  - (1) Manufacturing Capability and Experience
  - (2) Quality of Technical Approach
  - (3) Business Viability
  - (4) Merchant Supplier Orientation
  - (5) Cost/Price



- d. These criteria will be used to evaluate the proposal once it is determined that the offeror has met all of the FOA Project Requirements.
- e. See FOA.
- f. Risk is to be assessed as part of each of the above criteria.
- g. See FOA.
- h. The offeror must provide proof of meeting the domestic source requirement IAW DPA Law or the proposal will not be evaluated.
- i. The evaluation criteria are expanded upon below:
  - (1) Manufacturing Capability and Experience – Proposals will be evaluated on the recipient's degree of capability and experience in manufacturing alane or similar chemicals. Evidence may include, but is not limited to, intellectual property, documented manufacturing capability and experience, technical specifications, and dossiers of key personnel.
  - (2) Quality of Technical Approach – Proposals will be evaluated on the recipient's credibility and how reasonable their approach is for establishing/expanding a production capability for alane, also to include whether the proposed approach identifies major technical risks and clearly defines feasible mitigation efforts.
  - (3) Business Viability – Proposals will be evaluated on the recipient's business, technical and financial credibility, demonstrated experience, willingness and a credible business plan to become or remain a competitive, economically viable, responsive, supplier of alane for government and commercial markets.
  - (4) Merchant Supplier Orientation – Proposals will be evaluated on the extent to which the recipient demonstrates a commitment to being, or explanation of resources to be employed in establishing acceptance as, a merchant supplier for alane.
  - (5) Cost/Price – Proposals will be evaluated on the realism of the proposed cost, amount of recipient cost share, and consideration of proposed budgets and funding profiles. Cost sharing, unless waived, will be viewed favorably by the US Government in the proposal evaluation process (which will indicate a strong commitment to and self-interest in the success of the project).

## **IX. FOA with Calls (One-Step Process) Proposal Selection Information**

- 1. Categories:** Based on the evaluation, 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 evaluation, 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 the 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.

**Note:** Prior to award of a potentially successful offer, the Agreements Officer will make a determination regarding budget reasonableness.

## **X. Award Administration Information (FOA with Calls)**

**1 thru 8: See FOA.**

- 9. Ombudsman:** The Ombudsman article 5.020 entitled "Ombudsman" shall be contained in any Agreement resulting from this Solicitation.

**Please note the following Ombudsman information is changed from FOA.**

The AFRL Ombudsman is AFRL/PK Director  
Alternate Ombudsman is AFRL/PK Deputy Director  
1864 Fourth St.  
Wright-Patterson AFB OH 45433-7130  
(937) 904-9700  
email: AFRL.PK.OfficeAccount@us.af.mil

- 10. Proposal Reminders: a. thru c, and e thru j - see FOA**

d. Completed Title III Certifications and Representations are due with the proposal. Certifications & Representations can be found at Appendix I.

**FOA Appendices: See FOA for Appendices I thru V**

**Attached for this CALL:**

**Appendix VI** Statement of Objectives (SOO), Defense Production Act (DPA) Title III – High Energy Density Alane Fuel Manufacturing for DoD Systems Project, dated 15 August 2019