1-Step Funding Opportunity Announcement

Overview Information

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

NAICS Code: 325920

Federal Agency Name: Air Force Research Laboratory, AFRL/RXME, Materials and Manufacturing Directorate

Funding Opportunity Announcement Title: Defense Production Act (DPA) Title III Scale-Up of Green Energetics Project

<u>Additional information on the Defense Production Act Title III:</u>

This announcement is to solicit production technology project proposals for the Defense Production Act (DPA) Title III Program managed by the Office of the Secretary of Defense (OSD) and executed by the Department of Defense (DoD) Executive Agent Program Office, a component of the Manufacturing & Industrial Technologies Division (AFRL/RXM) of the Materials and Manufacturing Directorate, Air Force Research Laboratory (**www.dpatitle3.com**). As the Executive Agent for DoD's DPA Title III Program, the Air Force is responsible for executing programs that ensure domestic production capability for technology items that are essential to national defense.

Title III of the Defense Production Act (DPA) provides unique authorities, under which the Government may provide appropriate incentives to create, maintain, protect, expand, or restore the productive capacities of domestic sources (see below for definition) for critical components, critical technology items, and industrial resources essential for the execution of the national security strategy of the United States. The principal objective of all DPA Title III investments is to strengthen and expand these domestic productive capacities and to ensure Government access to critical technology items well into the future. Any agreements awarded under this FOA will be awarded under the authority of Title III of the Defense Production Act of 1950 as amended (50 U.S.C. App. § 2061 et seq.).

Each DPA Title III Program effort will provide incentives to domestic manufacturers to create, maintain, protect, expand, or restore their critical production technologies and to develop and/or adopt best business and marketing practices to achieve joint manufacturing capacity, quality, affordability, and economic viability requirements.

Solicitations shall be restricted to domestic sources as defined in the Defense Production Act of 1950: "A business concern that performs in the United States or Canada substantially all of the research and development, engineering, manufacturing, and production activities required of such business concern under a contract with the United States relating to a critical component or a critical technology item; and that procures from business concerns (described as above) substantially all of any components and assemblies required under a contract with the United States relating to a critical component or critical technology item." Territories and Protectorates of the United States, and the District of Columbia are considered part of the domestic United States.

Proposals should be addressed to the Contracting Point of Contact (POC) stated in Section VII of the Full Text Announcement.

Funding Opportunity Announcement Type (FOA): This is an Initial Announcement.

Funding Opportunity Announcement Number: FOA-AFRL-RQKM-2015-0019

Catalog of Federal Domestic Assistance (CFDA) Number(s): 12.800 Air Force Defense Research Sciences Program

Proposal Due Date and Time: **Wednesday, 27 May 2015, 2:00 p.m. Local Time.** ***NOTE:*** Any proposal, modification or revision received at the Government Office designated in this FOA after the exact 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 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 proposal submission is encouraged.

Solicitation Request: Air Force Research Laboratory, AFRL/RXME, Materials and Manufacturing Directorate, Wright Research Site, is soliciting technical and cost proposals on the research effort described below. Proposals should be addressed to the Agreements Negotiator stated in Section VII of the Full Text Announcement. This is an unrestricted solicitation. Small businesses are encouraged to propose on all or any part of this solicitation. The NAICS Code for this acquisition is **325920**, and the small business size standard is **750** employees. Proposals submitted shall be in accordance with this announcement. *There will be no other solicitation issued in regard to this requirement*. Offerors should be alert for any FOA amendments that may permit extensions to the proposal submission date.

System for Award Management (SAM) Registration: SAM is the primary Government repository for prospective federal awardee information and the centralized Government system for certain contracting, grants, and other assistance related processes. It replaces CCR/FedReg, On-line Representations and

Certifications (ORCA) and the Excluded Parties Lists System (EPLS). Offerors shall be registered in the SAM database prior to submitting an invoice and through final payment of any agreement resulting from this FOA. 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.

Type of Contract/Instrument: The Government intends to award a Department of Defense Grant and Agreement Regulations (DoDGARS)-based Technology Investment Agreement (TIA).

Estimated Program Cost: Total $7,040,000 - $3.52M Government share plus $3.52M Recipient share.

Anticipated Number of New Awards: The Air Force anticipates issuing one (1) award for this announcement, but reserves the right to award more than one or none.

Brief Program Summary: This project is to establish a domestic merchant supplier for an environmentally-friendly (green) drop-in replacement for toxic energetic materials used in ordnance and propulsion systems. The green energetic material is copper(I) 5-nitrotetrazolate, also known as DBX-1.

Communication Between Prospective Offerors and Government Representatives:

All questions before and after the FOA release shall be addressed in writing to Ms. Cathie Stropki, Agreements Negotiator, AFRL/RQKMT, catherine.stropki.1@us.af.mil and Ms. Dianna C. Aniton, Agreements Officer, AFRL/RQKMT, dianna.aniton@us.af.mil. After FOA 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/Agreements Officers are legally authorized to commit the Government.

Address any questions to:

Ms. Cathie Stropki
Agreements Negotiator
AFRL/RQKMT
2130 8th Street (Building 45)
Wright-Patterson AFB, OH 45433-7541
Catherine.Stropki.1@us.af.mil
937-713-9901

and

Ms. Dianna C. Aniton
Agreements Officer
AFRL/RQKMT
2130 8th Street (Building 45)
Wright-Patterson AFB, OH 45433-7541
dianna.aniton@us.af.mil
937-713-9897

Full Text Announcement

I. Program Description: Air Force Research Laboratory, AFRL/RXME, Materials and Manufacturing Directorate, is soliciting technical and cost proposals on the following research effort:

A. Statement of Objective: DPA Title III Effort, Scale-Up of Green Energetics Project

1. Scope: The objective of this effort is to establish a domestic merchant supplier for an environmentally-friendly (green) drop-in replacement for toxic energetic materials as a primary explosive. The green energetic material is copper(I) 5-nitrotetrazolate, also known as DBX-1. The supplier shall establish a flexible production capability that meets projected annual military and commercial demand (estimated to be 15,000 pounds per year) and scalable to affordably accommodate periods of greatly reduced demand. Further, the supplier shall develop and execute strategic business and marketing strategies that support the adoption of DBX-1 as a substitute for lead azide (LA), lead styphnate (LS), and, mercury(II) 5-nitrotetrazole (DXN-1).

The offeror shall scale-up production of DBX-1 from batch sizes of 100 grams to batch sizes between 1 kg and 2.25 kg (the largest batch size permissible for safety considerations) to meet projected military and commercial demands. The offeror shall conduct testing in support of qualification of DBX-1 base material for use by DoD at the 1 kg and larger batch size level. Qualification tests shall be in accordance with the latest revision of NAVSEAINST 8020.5 and the DoD Energetics Qualification Program Matrix for Primary Explosives included in Appendix 1. Further, the offeror shall assure and demonstrate that DBX-1 material at the 1 kg and larger batch sizes is fully compatible with extant automated high-speed detonator loading equipment used in industry.

2. Background: LA and LS have been widely used in DoD ordnance systems for decades and these materials and their applications are essential to national defense. DXN-1 was developed in the 1960's as a lead azide replacement, but is itself a hazardous material still used today in the Anti-Personnel Obstacle Breaching System (APOBS). Virtually all chemical detonators utilize either LA or LS as the critical transfer and/or initiating charge to generate the initial shock wave for proper detonation of subsequent main explosive charges. Despite being useful energetic material, LA and LS contain lead, a toxic heavy metal that is released to the environment during both production and use. Environmental health and safety regulations applicable to lead and mercury-containing materials continue to tighten. In 2008, the Environmental Protection Agency (EPA) reduced the allowable lead limits tenfold due to health issues (Reference National Ambient Air Quality Standards (NAAQS) 73 FR 66964). A 2012 National Academy of Sciences study, "Potential Health Risks to DOD Firing-Range Personnel from Recurrent Lead Exposure", reported high discharge of airborne lead from primary explosive discharge at firing ranges; increasing the likelihood of stricter regulations.

For more than a decade, the Naval Surface Warfare Center – Indian Head has worked to develop a suitable environmentally-friendly (green) drop-in replacement for LA, LS and DXN-1. The energetic material, copper(I) 5-nitrotetrazolate (DBX-1), has been demonstrated at the 100 gram batch size as a replacement for LA and in some cases, LS. DBX-1 has been qualified for Navy use. Other military services are now interested in transitioning to DBX-1. However, qualification and use of DBX-1 are limited by current production capacity.

3. **Objectives:** The objectives identified in Sections 3-a, 3-b and 3-c are standard requirements for a Title III project. The objectives identified in 3-d are the specific technical requirements for this particular project. The offeror shall propose a technical effort to address as many of the objectives in Section 3-d as deemed possible with the currently available Title III funding and offeror's proposed cost share for this effort.

Substantial involvement of the Government program official will be required through participation in recipients' periodic reviews of project progress, revisions of plans for future efforts and possibly business matters.

a. Program Management, Administration and Reporting

1) Manage and implement the project. Monitor and control the project's cost, schedule, and performance parameters.
2) Establish a cumulative monthly expenditure profile baseline for the government funds. Track the actual monthly expenditures by statement of work (SOW) element against

the baseline and report it to the government, graphically, each month.

3) Participate on the project's Integrated Product Team (IPT) and interface with Title III project managers and contracting (agreements) personnel.
4) Conduct Quarterly Project Management Reviews (PMRs) and ad hoc Technical Interchange Meetings (TIMs) as required. Up to two PMRs in any year shall be conducted at the recipient's facility, and at least one PMR per year shall be conducted at the Title III Program Offices at Wright-Patterson Air Force Base. Remaining PMRs shall be conducted by conference call. Key subrecipients shall actively participate in PMRs.
5) Conduct a Technical Project Kickoff Meeting no later than 60 days following award.
6) Identify, insure, maintain, operate and service all government and non-government owned capital equipment and tooling required to establish or maintain a domestic DBX-1 manufacturing capability. Update and provide the Government Equipment Property List at the time of quarterly PMRs and as required.
7) If equipment is procured using Title III funding, prepare for a No-cost Monitoring Phase after the conclusion of the technical effort to demonstrate acceptable utilization and maintenance of the government equipment in support of the long-term goals of this project. Updated business and marketing plans will be provided to the Government during the No Cost Monitoring Phase.
8) Establish and track Key Performance Parameters (KPPs) with Title III IPT concurrence. Threshold (minimum) and Objective targets should be established for at least two KPPs in each of the following four categories: Product Performance, Manufacturing, Financial and Marketing. Report KPP performance at quarterly PMRs and as required.
9) Conduct initial and final manufacturing demonstrations to validate the baseline and final capabilities. Demonstrations may be conducted concurrent with planned production if feasible.

b. Strategic Business Planning

1) Prepare, submit and implement a Strategic Business Plan that addresses the key aspects of establishing and maintaining a competitive and commercially viable capacity for the full rate production of DBX-1 in 1kg or larger batch sizes.
2) The comprehensive strategic business planning shall cover a minimum outlook of three years, and preferably five years, including all financial statements, actual and forecasts.
3) Provide performance-to-plan evaluations at regular intervals, with management review comments, to Title III so long as a contractual relationship exists.

c. Market Planning and New Business Development

1) Prepare, submit, and implement a marketing plan. Perform a market assessment, including military and commercial, foreign and domestic, to validate/verify the principal requirements, market trends, projections, and assumptions developed for guiding the manufacturer's business investment for DBX-1 production levels.
2) Establish a strategic marketing plan to address current and future customer needs for DBX-1.
3) Survey and be responsive to, and report to the government on, (DoD and commercial) customer needs, requests, and trends of DBX-1.
4) Provide performance-to-plan updates at regular intervals, including reports on business capture plans (target business awards, actual awards, and missed opportunities), to Title III so long as a contractual relationship exists.

d. Technical

1) Develop and implement a comprehensive plan detailing all necessary engineering, equipment, facility expansion, subrecipient requirements, materials, labor hours, and processes required to establish production of qualified DBX-1 (including constituent material sodium 5-nitrotetrazolate

(NaNT)) at the required production rate. The plan shall support the establishment of a flexible production capability that meets projected annual military and commercial demand (estimated to be 15,000 pounds per year) and is scalable to affordably accommodate periods of greatly reduced demand. Installed production capacity may be greater than 15,000 pounds per year and shall be based on the offeror's market research. An initial estimate of the market demand (military and commercial) for DBX-1 shall be reflected in the summary business plan that will be provided as part of the offeror's proposal package.

2) Secure all licenses and intellectual property rights necessary to produce and sell DBX-1 to military and commercial markets.

3) Identify and establish a baseline of cost and key performance parameters (KPPs) for the production of DBX-1, against which targeted objectives to be achieved will be compared, tracked, and periodically evaluated during the program. The cost objective shall be to achieve the same production cost as for LA.

4) Conduct an initial Manufacturing Readiness Assessment (MRA) to baseline current production capabilities and metrics for DBX-1 at the 100 gram batch size. The baseline MRA will demonstrate the offeror's existing production capabilities for DBX-1 and shall occur within 6 months after award of the agreement. (Reference http://www.dodmrl.com for information about MRAs and the methodology for completing an MRA).

5) Accept and qualify all new equipment and processes promptly upon installation, and maintain service and/or calibration documentation.

6) Evaluate all critical manufacturing processes and related technical elements to define areas where optimization of materials, operating parameters and core process technologies can be achieved. Incorporate technical design elements that reduce variation in the processes and increase production capacity.

7) Assure and demonstrate that the DBX-1 manufactured at the 1 kg and higher-level formulation is fully compatible with extant high-speed detonator loading equipment used by industry. Offeror shall demonstrate high-speed loading on Army M55 and C70 detonators in accordance with their respective performance specifications, Mil-D-14987A and MIL-DTL-32328. Prepare and submit for government review and approval a test plan detailing the approach to be used in demonstrating high-speed detonator loading. The plan shall include but is not limited to: industry partner that will provide and load the detonators, quantity of each detonator to be loaded to achieve statistically significant results, sampling plan, and proposed assessment criteria to be used in the evaluation of the loading success.

8) Conduct a final MRA to assess production capabilities and metrics for DBX-1 in 1 kg or larger batch sizes. The assessment shall be completed in conjunction with a DBX-1 manufacturing capability demonstration. The results of the demonstration shall be comparable to the expanded capability targets and the market demand projections. The final manufacturing capability demonstration and MRA will be conducted within the six month period prior to the end of the agreement.

9) Measure all production costs, including critical materials, facilities, equipment and personnel required to produce DBX-1 at required production rate.

10) Report against forecast costs, analyze all variances and compare to established targets.
11) Obtain and/or maintain Quality Management System Certification (e.g. ISO 9001-2008, AS 9100). Provide documentation supporting these and other relevant quality and safety certifications.
12) Conduct testing of the DBX-1 material at the 1 kg and larger batch sizes in accordance with the latest revision of NAVSEAINST 8020.5 (Primary Explosive) and the DoD Energetics Qualification Program Matrix for Primary Explosives (included in Appendix I).
13) Develop a plan to demonstrate batch-to-batch variation and material consistency within a batch. Use the DBX-1 specification and detonator performance tests to accomplish this task. Upon approval, manufacture a minimum of five batches manufactured in consecutive days to conduct batch-to-batch verification testing.
14) Propose a shipping configuration for government review and approval. Upon approval, obtain all required DoD and DoT shipping and hazard classification.

4. **Security Requirements:** All recipients shall participate in all activities associated with the disciplines of the organization's Industrial Security, Information Security, Personnel Security, Operations Security (OPSEC), and Antiterrorism, following appropriate measures in each program as required for this particular agreement. 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 recipient will ensure that all subrecipients and/or subcontractors, if applicable, conform to these requirements as required by the prime recipients. Guidance can be provided by AFRL/RX Security as needed.

Program Protection Plan (PPP) – Any potential critical program information (CPI) generated as part of this effort will be reviewed to determine the need for a PPP.

B. Deliverable Items:

1. Data Items:

The following reporting requirements are defined in Section 7 of the Agreement:

a. Article 7.040 Final Report (3 months after completion of the technical phase)

b. Article 7.050 Funds and Man-hour Expenditure Report (Quarterly)

c. Article 7.052 Recipient's Progress, Status and Management Report (Quarterly)

d. Article 7.054 Strategic Business Plan (9 months after receipt of agreement and annually thereafter; Use Government-Provided Outline for Guidance on recommended Structure and Detail)

e. Article 7.055 Property Control List (Quarterly/As Required; Use Government-Provided Template)

f. Article 7.057 Presentation Material (As Required)

g. Article 7.060 Marketing Plan (6 months after receipt of agreement and annually thereafter; Use Government-Provided Outline for Guidance on recommended Structure and Detail)

h. Article 7.063 DBX-1 Materials qualification test plan (Once)

i. Article 7.064 Detonator loading demonstration test plan (Once)

j. Article 4.030 Audit (As Required)

2. Other Deliverables:

Article 7.062 Product Samples (Samples will be required to be delivered to US Army, ARDEC and US Navy, NSWC-IH, in parallel with Recipient's material qualification task on an as-needed basis. Number and size (weight) of samples are projected to be minimal – 100s of grams)

C. Schedule: The estimated period of performance for this award is 39 months total, 36 months for the technical effort and 3 months for submittal of the Final Report.

D. Other Requirements:

1. Program security classification: Unclassified
2. Export Control: Information involved in this project **will** be subject to Export Control (International Traffic in Arms Regulation (ITAR) 22 CFR 120-131, or Export Control Administration Regulations (EAR) 15 CFR 710-774). A Certified DD Form 2345, Militarily Critical Technical Data Agreement, will be required to be submitted with proposal.

   Article 6.031 EXPORT-CONTROLLED DATA RESTRICTIONS will be incorporated into the Agreement as follows:

   (a) For the purpose of this article,
      (1) Foreign person is any person who is not a citizen or national of the U.S. or lawfully admitted to the U.S. for permanent residence under the Immigration and Nationality Act, and includes foreign corporations, international organizations, and foreign governments;
      (2) Foreign representative is anyone, regardless of nationality or citizenship, acting as an agent, representative, official, or employee of a foreign government, a foreign-owned or influenced firm, corporation or person;
      (3) Foreign sources are those sources (vendors, subrecipients,subcontractors, and suppliers) owned and controlled by a foreign person; and

   (b) The Recipient shall place an article/clause in subawards/subcontracts containing appropriate export control restrictions, set forth in this article.

   (c) Nothing in this article waives any requirement imposed by any other U.S. Government agency with respect to employment of foreign nationals or export controlled data and information.

   (d) Equipment and technical data generated or delivered under this agreement are controlled by the International Traffic in Arms Regulation (ITAR), 22 CFR Sections 121 through 128. An export license is required before assigning any foreign source to perform work under this agreement or before granting access to foreign persons to any equipment and technical data generated or delivered during performance (see 22 CFR Section 125). The Recipient shall notify the Agreements Officer and obtain written approval of the Agreements Officer prior to assigning or granting access to any work, equipment, or technical data generated or delivered under this agreement to foreign persons or their representatives. The notification shall include the name and country of origin of the foreign person or representative, the specific work, equipment, or data to which the person will have access, and whether the foreign person is cleared to have access to technical data (DoD 5220.22-M, National Industrial Security Program Operating Manual (NISPOM) <http://www.dtic.mil/whs/directives/corres/html/522022m.htm>).

E. Other Information:

1. Government Furnished Property (GFP) is not applicable.
2. Base Support/ Network Access: Not Applicable
3. Multiple awards subject to Fair Opportunity: Not Applicable
4. Data Rights Desired:

   a. Technical Data: Government Purpose Rights
   b. Non-Commercial Software (NCS): N/A
   c. NCS Documentation: N/A
   d. Commercial Computer Software Rights: N/A

II. Award Information

A sample TIA, along with other sample documents, is attached to this FOA.

Any clarifications/exceptions to the TIA articles, as presented in the sample TIA, must be stated at time of proposal submission.

A. Anticipated Award Date: 28 Sep 2015.

B. Anticipated funding:

Funding Profile	FY15	TOTAL
DPA Title III	$3.52M	$3.52M
Recipient Cost Share	$3.52M	$3.52M
Total Program	$7.04M	$7.04M

This funding profile is an estimate only and not an 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.

C. Number of awards anticipated: One. *However, the Air Force reserves the right to award zero, one, or more agreements for all, some or none of the solicited effort based on the offeror's ability to perform desired work.*

D. Non-Government Technical Advisors: All proposals submitted in response to this FOA may be subject to review by non-government personnel. Contractors employing these individuals and supporting each project are identified below. The role of these non-governmental personnel will be to function as technical advisors only to the Government technical evaluators. 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. Only Government employees will participate in the actual decision or selection of proposals for award.

Contractor Support Companies

Northrop Grumman Technical Services
4065 Colonel Glenn Highway
Beavercreek, OH 45431

Any concerns regarding this issue may be addressed to the Agreements Negotiator cited above.

III. Eligibility Information

A. Eligible Offeror: Solicitations shall be restricted to domestic sources as defined in the Defense Production Act.

B. Cost Sharing or Matching: Cost Sharing is anticipated.

1. For Technology Investment Agreements, the Government is required to seek cost sharing in the amount of 50% Recipient and 50% Government to the maximum extent practicable pursuant to DoDGARS Part 37.215. Cost share other than 50/50 requires preparation and approval of a special waiver. **If the Recipient does not propose a cost share of at least 50%, please provide justification which should address, in detail, factors that demonstrate the Recipient's vested self-interest and/or commitment to the success of the project as discussed in DoDGARS Part 37.215.**

2. Types of Cost Share proposed must be in accordance with DoDGARs 37.530 through 37.555.

C. Other:

1. Foreign participation: No
2. Offerors are advised that each may submit one and only one proposal as the prime awardee.
3. Offerors may be ineligible for award if all requirements of this FOA are not met on the proposal due date as identified above.

IV. Proposal and Submission Information

A. Overview: 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 evaluate proposals and award some, all, or none of the proposals received without negotiation/discussion; however, the Government reserves to right to negotiate with those offeror(s) whose proposal is selected for funding.

Offerors should be alert for any FOA amendments that may permit extensions to the proposal submission date.

For additional information, a copy of the Broad Agency Announcement (BAA) Guide for Industry and be found at http://www.wpafb.af.mil/shared/media/document/AFD-120614-075.pdf. This guide is specifically designed to assist the offeror in understanding the BAA proposal process which is similar to the FOA proposal process which does not have its own guide.

B. Proposals for Grants and Cooperative Agreements

1. **Grant Opportunity:** Go to http://Grants.Gov to find the grant opportunity. The initial screen will provide the synopsis for that specific grant opportunity. To view the entire opportunity open the "Full Announcement" box in the upper center of the synopsis page and select from the documents available under "Announcement Group." NOTE: http://Grants.Gov has tools and guiding documents in the left margin under "Applicant Resources" to help you find and apply for grant opportunities. Grants.gov requires Adobe Reader version 8.13 to open, download, save, and submit an application electronically. Adobe Reader version 8.13 is available for free from Grants.gov under "Applicant Resources," "Download Software."

2. **Proposal Cover Page – SF 424 (R&R) Form:** All proposals for grants or assistance, 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). The SF 424 (R&) can also be found at: http://www.grants.gov/web/grants/forms/r-r-family.html#sortby=1

3. **Certifications:** See the Representations and Certifications in Appendix II. To complete the Certifications you must check Block 18 of the SF 424 (R&R), and by signing it, 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.

4. **Proposals Submittal:** Hard Copies of Proposals should be submitted directly to the AFRL Contracting POC listed in this announcement.

5. **For Hard Copy Submission:** The original proposal and the number of copies specified in this announcement must be delivered directly to the Agreements Negotiator by the time and date specified in this announcement.

C. **Content and Form of Proposal Submission**: The paragraphs below identify proposal format and content. Proposals should be addressed via mail to the Agreements Negotiator identified in Section VII.

1. **General Instructions:** Offerors should apply the restrictive notice prescribed in the provision of DoDGARS 37.420. Also, disclosure of information will be in accordance with DoDGARS 37.420.

   a. Offerors should consider proposal instructions contained in the Broad Agency Announcement (BAA) Guide for Industry, which can be accessed on line at http://www.wpafb.af.mil/shared/media/document/AFD-120614-075.pdf. This guide is specifically designed to assist the offeror in understanding the FOA proposal process.

   b. Technical/management and cost/business volumes should be submitted in separate volumes, and **must be valid for 180 days.**

   c. Proposals must reference the announcement number ***FOA-AFRL-RQKM- 2015-0019.***

   d. **Offerors must submit one-original and 5 hard copies of their proposals via mail to the Contracting POC, identified in Section VII. NOTE: No proposals sent by fax, Grants.gov online submission, or e-mail will be accepted.**

   e. Offerors must include four (4) CDs in Microsoft WORD Format containing all electronic versions of required submittals (Technical/Management Proposal/SOW/Cost/Business Proposal). All electronic versions must match the hard copies.

      1) Technical/Management proposals, Statements of Work and Subcontracting Plan (if Applicable in accordance with FAR 19.7) must be provided in Microsoft WORD.

2) The cost file(s) spreadsheets must include the formulas for calculating cost element bases (i.e., G&A, O/H, etc.)
3) The CDs should be labeled with the company name and proposal title.

f. Offerors are advised that only contracting/agreements officers are legally authorized to contractually bind or otherwise commit the government.

g. The cost of preparing proposals in response to this FOA 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 DoDGARS 34.17.

h. 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 listed in Section VII for delivery instructions.

i. Cover Page: The cover page should include the FOA number, FOA title as well as the name and telephone number for the principal points of contact (both technical and contractual), and any other information that identifies the proposal. The cover page should also contain the proprietary data disclosure statement, if applicable. However, it is noted that the Statement of Work portion of the Technical Proposal shall be formatted so that it is absent of any proprietary data and therefore fully incorporable into a resulting award and releasable pursuant to Freedom of Information Act requirements.

j. Table of Contents: Include a Table of Contents immediately following the cover page.

2. Technical/Management Proposal:

a. Page Limitations: The following describes the page limitations on the proposal submittal:

Technical Discussion:	up to 35 pages
Summary Business Plan:	up to 25 pages
Statement of Work:	up to 10 pages (not included in tech proposal page count)
Tech Proposal Total:	up to **60** pages

Note 1: The Cost Proposal requirements are provided later in this announcement.

Note 2: The table of contents and cover page will not be included in the page count referenced above.

1) Proposal shall be limited to **60** pages Total as stated earlier, prepared and submitted in Microsoft Word format.
2) Font shall be standard 11-point business font Arial.
3) Character spacing must be "normal," not condensed in any manner.
4) 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.
5) 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.
6) Pages shall be numbered starting with the cover page being Page 1, and the last page being no greater than Page **61**. 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.
7) 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.
8) **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.**

b. Technical Discussion and Information: The proposal 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, data and facilities and resumes of personnel who will be participating in this effort should also be included as attachments to the technical proposal.

1) In support of evaluation criterion Manufacturing Capability and Experience, evidence may include, but is not limited to, existing component testing, demonstrations, and/or qualification efforts, existing manufacturing capability, intellectual property, technical specifications for existing components, and dossiers of key personnel.
2) In support of evaluation criterion Quality of Technical Approach, evidence may include, but is not limited to:

component product/production road maps including product qualification plans, value stream maps, equipment specifications, production flow diagrams, process operation plans, and quality control plans (test and inspection plans).

3) This volume shall include a SOW detailing the technical tasks proposed to be accomplished under the proposed effort and suitable for incorporation into the Agreement. ***Do not include any proprietary information in the SOW*****.** Refer to the BAA Guide for Industry referenced above to assist in SOW preparation.

c. Any questions concerning the technical proposal or SOW preparation shall be referred to the Agreements Negotiator cited in the Overview Information.

3. Technical Approach:

a. Background/Scope/Program Objectives: The technical proposal must convey an understanding of the problems or limitations of the current state of the technology and the intended application(s). It should be an overall summary of the production technology issues addressed by the offeror's proposal without merely repeating the requirements. This should provide a vision of what will ultimately be achieved, how it will be achieved, and what solution this effort will produce.

b. Program Plan: The program plan should present an orderly progression of the technical and management efforts to be performed. Upper and lower bounds should be placed on what will be attempted or completed within the confines of program funding. Some redundancy is inevitable, but should be used judiciously to stress key points.

c. Technical Discussion: In this section, the offeror should provide technical detail and analysis necessary to support the technical approach they are proposing. They must clearly identify the core of the intended approach. If the offeror has a "new and creative" solution to the Production Technology Partnership goal(s), that solution should be developed and analyzed in this section. The proposal should include a risk assessment of key technical, schedule or cost areas and their potential impact on the program. If subrecipients or subcontractors are proposed, identify why selected and what tasks they are to perform. The offeror shall reference/acknowledge the acceptability of all specified/applicable data items in the list of deliverables that were identified in the Statement of Objectives.

d. Program Schedule: The schedule represents the offeror's plan to perform the program tasks in an orderly, timely manner. Provide each major task identified in the SOW as a separate line on the program schedule chart. Provide a schedule of when all deliverables identified in the announcement are to be delivered. The period of performance shall be proposed in the format "includes 36 months for technical effort and 3 months for Final Report."

4. Capabilities and Relevant Experience

a. Identify related Government, commercial, previous, or related production efforts.

b. Identify facilities/resources proposed for the effort.

c. Identify and provide resumes of all key personnel (include key subcontract/consultant personnel).

5. Management

a. Program Organization: Identify the program organization. Organizational charts may be helpful in showing the structure of the program.

b. Management Approach: Identify management approach to assure contract completion (e.g., meeting schedule, cost and program goals).

c. Appendix: Appendices may include technical reports, published papers, and referenced material in support of the offeror's proposal. Commercial product advertising brochures may also be provided. Please be aware that these items shall be included in the proposal page limitation.

6. Summary Business Plan: The summary business plan describes how the offeror's production capability developed or expanded under the project will achieve/maintain long-term economic viability. The plan identifies target customers (both military and commercial) as well as specific targeted military systems (where information is available). Financial information required in Appendix IV – Summary Business Plan Outline must be provided. It should be noted by all offerors that a Summary Business Plan must be submitted with the proposal and is one of the proposal submission requirements listed above. A sample outline for the Summary Business Plan appears in Appendix IV of this FOA. Length is not to exceed **25** pages. Note: The Summary Business Plan is not the same as the Strategic Business Plan that is a required annual deliverable item after award.

7. Offeror's Statement of Work (SOW)

a. The SOW developed by the offeror and included in the proposal may be incorporated into a binding instrument. The SOW should build upon the requirements of the Government's SOO (Section I.A.1.).The proposed SOW must contain a summary description of the technical methodology as well as the task description, but not in so much detail as to make the agreement inflexible. Do not include any proprietary information in the SOW. The Government requires a SOW that is fully releasable under the Freedom of Information Act to allow the public to be informed of the use of Government Funds; consequently, it is imperative that no company-sensitive information be included in the SOW of the technical proposal. Length is not to exceed **10** pages.

b. The following is offered as a recommended format for the SOW. Begin this section on a new page. Start your SOW at Paragraph 1.0.

1.0 Scope: This section includes a statement of what the program covers. This should include the overall effort to be advanced or capacitized, objectives/goals, and major milestones for the effort.

2.0 Requirements:

2.1 The work effort should be segregated into major tasks and identified in separately numbered paragraphs (similar to the numbered breakdown of these paragraphs). Each numbered major task should delineate by subtask the work to be performed, including any cost-sharing work, and should be sequentially numbered.

2.2 The offeror must identify all reviews (by milestone or task) and when/where the reviews will be conducted.

2.3 The offeror must identify any and all hardware/software to be delivered to the Government as a result of the program.

Any questions concerning the proposal, whether technical or contractual in nature, shall be referred to the Contractual POC stated above.

8. Cost Proposal Spreadsheet: The cost proposal spreadsheet is highly recommended to provide complete details of the costs (including cost share portion) associated with the entire proposed effort. The budget should be in the offeror's fiscal year.

The electronic submission of the Excel spreadsheet associated with the Cost Proposal should be in a "useable condition" to aid the Government with its evaluation. The term "useable condition" indicates that the spreadsheet should visibly include and separately identify within each appropriate cell any and all inputs, formulas, calculations, etc. The term "useable condition" also indicates using meaningful labor descriptors such as Senior Material Scientist. Do not use internal cost codes which are meaningless outside of your organization (such as labor category 301) and provide no common knowledge description of the labor type nor cost being proposed.

As described above, offerors can find the Cost Proposal Spreadsheet in Appendix V.

9. **Cost / Business Proposal**:

a. Separate the proposal into a business section and cost section. Adequate price competition is anticipated.

b. The business section should contain all business aspects to the proposed agreement, such as type of assistance instrument, any exceptions to terms and conditions of the announcement model agreement, any information not technically related, etc. Provide rationale for exceptions.

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

d. Cost proposals including the cost proposal spreadsheet have no page limitations; however, offerors are requested to keep cost proposals to 100 pages as a goal. The following information must be included in this volume:

1) The proposal shall be furnished with supporting schedules and shall contain a person hour breakdown per task. The person hour breakdown per task includes labor category showing number of hours, labor type being utilized (such as senior engineer, 1600 hours total, proposed at $20.00 hourly rate. The cost proposal shall include a time-phased description of anticipated costs over the entire effort (see Appendix V). Time phasing shall be shown at least quarterly with a preference for monthly breakout.
2) The costs shall be broken out by offeror and government cost. If the FOA provides the schedule of estimated Government funding, the proposal shall show how the

proposed plan is compatible with the Government funding schedule. If it is not compatible, the offeror shall explain how the incompatibility is to be remedied.

3) In consideration of adequate price competition, the government will be determining the Price Reasonableness and Cost Realism of your proposal. To facilitate this, offerors are required to provide, as a part of their Cost section, information determined as necessary by the offeror to demonstrate/support the submission of realistic and reasonable prices/costs for the technical effort proposed.
4) Of importance in this cost section is the offeror's analysis demonstrating the relationship between the cost information submitted and the business and technical effort set forth.
5) Direct labor proposed should include a breakout of the number of labor hours for each proposed labor category and indicate the basis for proposed rates (Forward Pricing Rate Agreement (FPRA) or Recommendation (FPRR), an estimating model, historical projections or some other reasonable method for projecting costs. All costs proposed must be supported and clearly described. Do not use internal cost codes which are meaningless outside of your organization (such as labor category 301) and provide no description of the labor type or cost being proposed. Instead use meaningful labor descriptors such as Senior Material Scientist.
6) Travel proposed should include the number of trips, travelers, days, destinations, necessity, and timeframe. Note that proposed travel costs are to be included in appropriate area of Cost Proposal Spreadsheet too.
7) The Material and Equipment cost element should include a breakdown of the types and quantities proposed and the basis that was used to derive the cost estimate such as purchase orders, vendor quotes, engineering judgment, or historical data. Note the Material and Equipment cost elements are to be included in the Cost Proposal spreadsheet too.
8) Any proposed Subcontracts or Subrecipients should address why the proposed subcontract or subrecipient is necessary for the effort and how the price was determined reasonable. Proposed Subcontracts or Subrecipients cost proposals shall be at the same level of detail required for the prime recipient's cost proposal.
9) The material solicited in this volume will facilitate the government's evaluation of price reasonableness and determination of cost realism. The receipt of information from offerors is more relevant to an analysis of resources proposed for the technical program tendered than uncorrelated and voluminous data (i.e., your analysis should

address the specific complexities of the work proposed and the rationale for the specific resources required to complete the program).

10) The offeror shall also state in this section whether its accounting/financial systems have previously been audited by a government agency or independent auditor and provide a focal points name, phone number, and email address;

10. **Proposal Content Summary**: You may be ineligible for award if all requirements of this solicitation are not met on the proposal due date. Reference Section VIII. H for a Checklist of the requirements.

D. Proposal Due Date and Time: Wednesday, 27 May 2015, 2:00 p.m. Local Time. NOTE: Proposal receipt after the due date and time of this FOA is "late" and will not be considered except at the Agreements Officer's discretion.

NOTE: Intent to Propose: Offerors that anticipate submitting a proposal are requested to submit an e-mail to Cathie Stropki, Agreements Negotiator, at Catherine.Stropki.1@us.af.mil containing the name of the recipient, the POC, and the recipient's intent to submit a proposal. This "Intent to Propose" is requested by **Wednesday, 06 May 2015, 4:00 p.m. Local Time.**

E. Intergovernmental Review: None

F. Funding Restrictions: None

G. Other Submission Requirements: ***Proposals must be submitted to: Cathie Stropki, AFRL/RQKMT, 2130 8th Street, Building 45, Wright-Patterson AFB, OH 45433-7541.***

V. Proposal Review Information

A. Evaluation Criteria: The selection of a recipient for award will be based on an evaluation of each offeror's proposal (both technical and cost/price aspects) to determine the overall merit of the proposal in response to the announcement, as well as on Agency need and funding availability. Award will be based on an evaluation of the offeror's technical & cost proposal to determine the overall merit of the proposal in response to the FOA and SOO requirements. The evaluation criteria are composed of five factors. Factors 1 through 5 are in descending order of importance.

1. **Manufacturing Capability and Experience** – Proposals will be evaluated on the offeror's degree of capability and experience in the production of DBX-1.

2. **Quality of Technical Approach** – Proposals will be evaluated as to the credibility and the logical approach for assuring a domestic, full-scale, production capability of DBX-1.

3. **Business Viability** – Proposals will be evaluated on the offeror's business, technical and financial credibility, demonstrated experience, willingness, and a credible business plan to become or remain a competitive, economically viable, responsive, merchant supplier of DBX-1 for government and commercial markets.

4. **Merchant Supplier Orientation** – Proposals will be evaluated on the extent to which the offeror demonstrates a commitment to being, or explanation of resources to be employed in establishing acceptance and credibility as, a merchant supplier of DBX-1 as defined in Certification Regarding Merchant Supplier Orientation.

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 will be viewed favorably by the US Government in the proposal evaluation process (as it indicates a strong commitment to and self-interest in the success of the project).

Proposal Risk Assessment: *Risk is to be assessed as part of each of the above criteria. Proposal risk for technical, cost, and schedule will be assessed as part of the evaluation of the above evaluation criteria. Proposal risk relates to the identification and assessment of the risks associated with an offeror's proposed approach as it relates to accomplishing the proposed effort. Tradeoffs of the assessed risk will be weighed against the potential payoff.*

B. Review and Selection Process

1. **Categories**: The technical and cost proposals will be evaluated at the same time and categorized as follows:

   a. **Category I**: Demonstrates technical merit. Is important to agency programs. The offeror presents relevant experience and access to adequate resources. Risk is acceptable. The cost/price is reasonable and realistic. Proposals in Category I are recommended for acceptance (subject to availability of funds) and normally are displaced only by other Category I proposals.

   b. **Category II**: Demonstrates technical merit; is important to agency programs; and presents relevant experience and access to adequate resources; but requires further development. Risk is acceptable. The cost/price is reasonable and realistic. Category II proposals are recommended for acceptance, but at a lower priority than Category I.

c. **Category III**: Does not demonstrate technical merit; does not meet agency needs; does not present adequate experience or resources; the risk level is unacceptable; or the cost/price is not reasonable or realistic.

2. No other evaluation criteria will be used. The Air Force reserves the right to select for award any, all, part or none of each proposal received.

VI. Award Administration Information

A. Award Notices: Offerors will be notified whether their proposal is recommended for award, by letter or e-mail, on or about **10 August 2015**. The notification is not to be construed to mean the award of an agreement is assured, as availability of funds and successful negotiations are prerequisites to any award.

B. Administrative and National Policy Requirements: See Section I.

VII. Agency Contacts

Address questions to:
Ms. Cathie Stropki, Agreements Negotiator
AFRL/RQKMT
2130 8th Street (Building 45)
Wright-Patterson AFB, OH 45433-7801
catherine.stropki.1@us.af.mil
937-713-9901

and

Ms. Dianna C. Aniton
Agreements Officer
AFRL/RQKMT
2130 8th Street (Building 45)
Wright-Patterson AFB, OH 45433-7541
dianna.aniton@us.af.mil
937-713-9897

VIII. Other Information

A. Support contractors: Only Government employees will evaluate proposals for selection. Offerors are advised that employees of commercial firms under contract to the Government may be used as advisors only to administratively process proposals, monitor recipient performance, or perform other administrative duties requiring access to other contractors'/recipients' 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. Below are the contractors that are supporting this program.

Northrop Grumman Corporation
Technical Services Sector
4065 Colonel Glenn Highway
Beavercreek OH 45431

B. Informal Feedback Sessions: When requested, an informal feedback session will be provided. The process will follow the time guidelines outlined in the notification letter.

C. Wide Area Work Flow: NOTICE: Any agreement resulting from this solicitation will contain the article 4.070—Payment Reimbursement, which allows electronic submission of all payment requests. The Department of Defense is adopting Wide Area Work Flow-Receipt and Acceptance (WAWF-RA). Any agreement resulting from this solicitation will allow use of WAWF-RA for invoicing and receipt/acceptance, and provide coding instructions applicable to this agreement. Offerors 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/

D. 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.

E. Reporting Executive Compensation and First-Tier Sub-contract/Sub- Any grant or agreement award resulting from this announcement may contain the award term set forth in 2 CFR, Appendix A to Part 25.
http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=127f4c5405e1a4818720e6720fda0dae&n=2y1.1.1.3.3&r=PART&ty=HTML#2:1.1.1.3.3.3.1.14.1.

F. Contractor Business Systems: Financial Management Systems: IAW DoDGARS 34.11 and 37.615, is hereby incorporated by reference.

G. Ombudsman: The Ombudsman article 5.020 entitled "Ombudsman" shall be contained in any Agreement resulting from this Solicitation. The AFRL Ombudsman is Barbara G. Gehrs, Director of Contracting, AFRL/PK, 937-904-4407, email: Barbara.Gehrs@us.af.mil.

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

1. Proposals are due to the Agreements Negotiator.
2. Proposals are due no later than the due date and time specified in this announcement.
3. Proposal page limits are strictly enforced. See Section IV.C.2.a. of the solicitation for page limits.
4. Completed Title III Certifications and Representations are due with the proposal. Certifications and Representations can be found at Appendix II.
5. The Cost/Business Proposal must contain all information described in the Content and Form of the Proposal Section.
6. For any subaward or subcontracts proposed, the Cost/Business Proposal must contain an quote/analysis.
7. The Cost/Business Proposal must contain any exceptions to the sample Model Agreement Terms and Conditions. (See Appendix III for sample model agreement). However, be advised that the document awarded may include articles in addition to those in the models, and/or articles in the models may be deleted, depending on the specific circumstances of the individual program. Any additions or deletions will be discussed with the offeror prior to award of the document. In the interest of streamlining and in order to be in position to award within days of completion of the technical evaluation, it is imperative that you review the model TIA appropriate for your business type and provide with your proposal any exceptions to terms and conditions.
8. Proposals must be submitted in the format specified in Section IV.
9. Offerors who have Forward Pricing Rate Agreements (FPRA's) and Forward Pricing Rate Recommendations (FPRR's) should submit them with their proposal.
10. This effort is subject to export control; therefore offerors must submit a Certified DD Form 2345, Militarily Critical Technical Data Agreement, with proposal.

Appendix I DoD Energetics Qualification Program Matrix for Primary Explosives
Appendix II Title III Representations and Certifications
Appendix III Sample Technology Investment Agreement
Appendix IV Sample Summary Business Plan Outline
Appendix V Sample Cost Proposal Spreadsheet