Battlefield Airborne Communications Node (BACN) Payload Operations and Sustainment Program

Solicitation Number: BACN-OS-21;

Agency: Department of the Air Force

Office: Air Force Materiel Command

Location: AFLCMC – Hanscom

Classification Code: 58*

D – Information technology services, including telecommunications services

NAICS Code: 334220*

Sources Sought Synopsis for Battlefield Airborne Communications Node (BACN) Payload Operations and Sustainment Program

NOTICE: THIS IS NOT A SOLICITATION. The purposes of this notice is to conduct a Sources Sought Synopsis to determine potential sources. Information received will be used for planning purposes and market research only. The Government will not pay for any information received in response to this notice.

Summary: The Air Force Life Cycle Management Center/BACN Branch (AFLCMC/HNAB) seeks written industry statements of qualifications for companies capable of providing the specific services required to meet BACN mission performance requirements. These services include (1) providing a BACN payload system that meets current BACN airborne communications gateway requirements, (2) deploy, sustain and operate the BACN payload systems in OCONUS locations to support combat operations, (3) further develop the BACN payload system capabilities to meet evolving user operational requirements, (4) support potential redeployment of BACN from current operating locations to new locations, within OCONUS or back to CONUS, and (5) potentially assist the Government in transitioning to organic payload operations and sustainment, to include establishment of a host base facility.

This Sources Sought is issued as part of AFLCMC/HNAB's market research for potential companies capable of meeting all of the BACN Payload Operations and Sustainment Program requirements identified herein. HNAB makes no commitment to actually solicit proposals or issue a contract. Further, HNAB may only contract for portions of the scope of the potential support tasks, if any contracts are issued. HNAB is seeking page-limited Statements of Qualifications from companies capable of delivering all of the services described below. Should funding and a defined need become available to contract for the intended capabilities, the period of performance is planned to span five years, from 24 January 2021 through 23 January 2026. HNAB makes no commitment to solicit proposals or issue a contract based on this notice. Current BACN Payload Operations are being executed under a Sole Source contract with an Approved J&A with Northrop Grumman Mission Systems (NGMS).

BACN System Description: The current BACN system provides the Air Force (AF) with a flexible, long-endurance, and multi-mission airborne communications capability. The BACN system is comprised of E-11As (Bombardier BD-700 aircraft and BACN payload) and Payload Control Element (PCE) ground stations that are used to control the payload. Currently there are four E-11As and several PCEs that can be used separately or in combination depending on

mission needs. Additionally, there are four EQ-4Bs (Block 20 Global Hawk aircraft) equipped with the BACN payload along with PCEs to control the BACN payload on the EQ-4Bs.

The BACN system facilitates tactical edge information exchange by reducing communications issues associated with incompatible systems, adverse terrain and distance. These capabilities are achieved without modifying, or placing size, weight, and power (SWaP) loads upon end-user platforms.

BACN increases interoperability, resulting in forces that execute faster, more reliably, and with less risk. The system links Department of Defense (DoD) agencies and coalition forces that use different incompatible systems. The system's data translation and forwarding features provide the means to connect United States Air Force (USAF) legacy links as well as provide interoperability with other DoD departments and allied forces. BACN is a multi-faceted gateway communications system providing the military commander with a versatile means of exchanging information from multiple air, ground, and maritime sources, to include host nation, joint, and coalition forces via message relay, translation and forwarding. It facilitates the transport of data and voice across the battle space enabling network connectivity among weapon systems, sensors, warfighters, decision makers, platforms and command centers at all echelons of command and control (C2).

Commanders can employ BACN to augment theater communications and support deployed ground forces. Should ground forces move forward, BACN can move forward providing agile and reliable communications support. The system provides Beyond Line-of-Sight (BLOS) voice and data relay providing greater range for communication links. The system provides commanders with versatile and flexible communications support across the range of military operations.

The BACN system was originally developed as a Quick Reaction Capability (QRC) to meet a Combatant Commander's Joint Urgent Operational Need (JUON). As a "JUON" program, the acquisition was governed by Air Force Instruction 63-114, *Quick Reaction Capability Process* with streamlined oversight and acquisition documentation, as well as rapid development and fielding of war-fighter capabilities. In May 2018, the BACN PMO received formal direction to transition from a JUON to an enduring program of record. In transitioning to a program of record, the BACN PMO plans to establish a fixed host base facility and potentially migrate portions of the program from contractor logistics support to organic operations and sustainment.

Current BACN Contracts: The current BACN system is managed by AFLCMC/HNAK under two primary contracts: (1) The BACN Payload Follow-on Operations and Sustainment Contract and (2) The BACN Platform Maintenance Contract

The current BACN Payload Follow-on Operations and Sustainment contract was awarded to Northrop Grumman Mission Systems (NGMS) in January 2018. This contract provides support for the eight currently fielded BACN payloads, including their operations, maintenance and sustainment in OCONUS operating locations. Under this contract, NGMS also provides the BACN ground support systems known as the Payload Control Element-Launch (PCE-L) and PCE-Mission (PCE-M), as well as the PCE-L and PCE-M operators and maintainers. This contract will expire on 23 January 2020. There is a proposal and modification currently in progress to extend the current Payload Contract by 1 year, to January 2021, as approved under the Justification and Approval document dated 17 May 2016. The forthcoming expiration of this contract is the key reason for seeking a new BACN Payload Operations and Sustainment Program contract. Since the BACN system was acquired under the rules of a QRC program as a JUON, there is limited

Government owned design documentation for the current BACN payload and the BACN ground systems.

For information purposes, the second primary BACN contract is the E-11A Platform Maintenance Follow-on Contract. It was competitively awarded in July of 2017 to Northrop Grumman Technology Services (NGTS) and provides aircraft maintenance services for the four E-11A BACN aircraft. The period of performance for this contract began on 24 Jan 2018 with a 1-year base period and four 1-year options. **E-11A platform maintenance IS NOT part of this sources sought and the Government is not interested, at this time, in potential E-11A platform maintenance sources.** The Platform Maintenance contractor is required to work cooperative with the Payload contractor, specifically to provide access to the E-11A aircraft for payload maintenance actions. As a point of information, USAF pilots fly the E-11A airplanes and there are no other equipment operators onboard during BACN missions. All BACN payload operations are currently managed via remote control using the PCE-L and PCE-M.

Sources Sought Request for Information: The primary purpose of this Sources Sought Request for Information (RFI) is to assist HNAB's market research efforts to determine the availability and status of potential BACN payload suppliers. The Government is only interested in responses from offerors that have proven fielded systems or existing advanced prototype systems that meet or have the potential to meet all of the current BACN payload technical and functional capabilities. **At this time, the Government IS NOT interested in responses from offerors that would design, develop and build a completely new system to meet BACN payload requirements.** The current BACN payload technical and functional capabilities are defined in a BACN Technical Requirements Document (TRD). The TRD is available, upon request, to potential suppliers that submit a request for the TRD to the Government and identify the fielded or advanced prototype system they intend to use or enhance to meet BACN payload requirements. For potential offerors whose proven fielded or existing advanced prototype systems don't currently meet the full complement of BACN payload technical and functional capabilities, the Government is requesting a Rough Order of Magnitude (ROM) estimate of both cost and schedule required to enhance these systems to achieve a fully TRD-compliant capability. These ROMs will not be binding on the offeror or the Government. The ROMs are for market research only and HNAB makes no commitment to solicit proposals or issue a contract. Offerors may be requested to support an Industry Day and/or potential site visits to present and demonstrate the capabilities of their BACN payload system. There are currently no industry days planned for this activity; any potential industry day would be advertised via FBO. The Government will determine the need for an Industry Day and/or Site Visits based on the responses to this RFI.

Future BACN Payload Operations and Sustainment Program

In addition to providing a BACN payload, offerors must also demonstrate the ability to meet current BACN mission requirements and anticipated requirements during the five-year period of performance of a potential future BACN Payload Operations and Sustainment contract. The potential contract has a planned 24 January 2021 through 23 January 2026 period of performance. The scope of this potential future contract is summarized in the draft Statement of Objectives provided below. Based on the responses to this notice, the Government may modify the anticipated scope and duration of the potential future contract. For example, the Government may continue the current sole-source approach until such time as a competitive BACN payload marketplace is established.

Draft Statement of Objectives:

1. Deployed Payload Operations and Sustainment

a. Provide, operate and support BACN payloads in-theater. The scope of this effort includes the necessary manpower and resources required to provide, operate and support the BACN airborne payloads and any associated ground equipment needed to execute the BACN mission in deployed OCONUS locations. BACN mission requirements and BACN payload technical and functional requirements are defined in the BACN TRD. Sufficient quantities of BACN payloads are required to support the current fleet of four E-11As and four EQ-4Bs. Additional BACN payloads and additional payload support may be required should the Government acquire additional BACN platforms (either E-11As, EQ-4Bs, alternative platforms or a combination thereof) during the period of performance of the contract. Supply and support of any ground equipment or specialized test and maintenance equipment required to operate and support the BACN payload. Operations support including mission planning, data recording, data reduction and daily status and metrics reporting.

b. Provide BACN payload and associated ground equipment maintenance and material repair support to include the following functions:

    i. Use of the Air Force's Integrated Data Maintenance System (IMDS) and Automated AFTO Form 781 Management and Industrial/Support Equipment Record AFTO Form 244/245 to record BACN payload and any associated ground support equipment maintenance activities.

    ii. Establishment of a Failure Reporting, Analysis and Corrective Action System (FRACAS). The Government shall be allowed access to the FRACAS data and the corrective action database. The FRACAS results shall be posted in a monthly report.

    iii. Tracking of system deficiencies and software changes. Ensure system deficiencies or software changes designed to improve Reliability, Maintainability, and Availability (RM&A), safety, or that otherwise qualify as normal life-cycle support discovered during tests and operations are recorded and reported to the Government. Notify the government immediately of CAT I deficiencies. Provide recommended deficiency solutions and impacts to the program to the Government, including cost and schedule.

    iv. Engineering Change Proposals. In the event of a configuration or design change to the BACN payload, provide recommended deficiency solutions, cost, and schedule to the Government via an Engineering Change Proposal (ECP).

    v. Track and overcome Diminishing Manufacturing Sources issues. Perform Diminishing Manufacturing Source (DMS) redesign activities for non-GFP items to the extent that alternate COTS parts meeting form, fit and function are available.

    vi. Provide rapid repair and return of failed or faulty payload components. Employ a sound maintenance approach to ensure repaired items and spare support are sufficient to meet Air Force mission requirements for continuous operations. Deliver appropriate repaired items or components to designated Government depots or other locations as specified by the program office.

    vii. Provide supply support and stockage. Provide supply support for the fielded systems consisting of spares and associated material stock to meet RM&A requirements. This support shall include monitoring and management of stock levels, controlled storage of stock and Government Furnished assets, depot requisition, receipt, issue, packaging, handling and shipping activities.

c. Provide program management and systems engineering functions to include configuration management, quality control, system test and evaluation, GFP audit and management, integrated logistics support, technical order development and management, and training. Contractor personnel supporting the BACN Payload Operations and Sustainment Program must be U.S. citizens and in most cases capable of holding or have at least a DoD SECRET security clearance.

d. Provide software maintenance and support for the BACN payload operating software and all associated support software products. Operate and sustain a BACN System Integration Laboratory (SIL) representative of the BACN system elements, including hardware and software for the E-11A, EQ-4B and/or alternative platform installations to support payload design, development, integration, test and maintenance activities. Formal verification of system upgrades, interoperability, and corrections to system deficiencies and configuration management of the system hardware and software baseline prior to incorporation into the BACN payload. Deployment of BACN payload hardware and software updates upon approval by the Government.

e. Provide travel and Other Direct Costs (ODCs). Travel, subsistence, transportation, and other direct costs to support the execution of the contract, including the long-term posting of operations and maintenance personnel overseas in combat theaters of operations such as Southwest Asia.

f. Provide continued satisfaction of Cybersecurity requirements. Satisfy the Cybersecurity requirements for the BACN program to continue to maintain an accreditable system that satisfies the TRD requirements and adheres to the Risk Management Framework (RMF) process. Provide subject matter experts in RMF processes and secure systems engineering to support the full spectrum of CS-related activities over the system life cycle. Continue to develop, maintain, implement, and document in a Vulnerability Management Plan (VMP), the process for maintaining the security posture of the BACN system both during development and deployment. This process shall include continuous monitoring and assessment of vulnerabilities, as well as testing and application of corrective measures, such as patches and signature updates. The VMP shall also describe the relationship of this process with the Configuration Management Process.

g. Provide Aircraft Airworthiness Certification support. As the manager of the Payload configuration baseline for equipment installed on either the E-11A or the EQ-4B, the contractor will interface with the E-11A Platform Maintenance contractor (currently NGTS) or the EQ-4B Program Office for airworthiness certification matters. This is expected to occur on an as needed and pro-active basis with the contractor providing subject matter expertise in all required engineering disciplines.

2. BACN Payload Capability Development

Further develop the BACN payload system capabilities to meet evolving user operational requirements. During the period of performance of this contract, the Government anticipates potential improvements such as incorporation of 5^{th}-to-4^{th} generation communications interfaces, alternative radio sources, improved or new communications waveforms, improved network connectivity, increased bandwidth availability, alternative system architectures, etc. that may be candidates for incorporation into the BACN payload. These are capabilities improvements beyond DMS component replacement. Based on the maturity of these capabilities, BACN program priorities, funding availability and Government approval; develop and incorporate capability improvements into the BACN payload along with associated sustainment functions.

3. Site Stand-up, Relocation, Demobilization

Support site stand-up or relocation of BACN payload operating locations based on mission requirements. Assist the Government in conducting site surveys to determine feasibility of operating, controlling and maintaining the BACN payload at new operating locations as required. Prepare and deliver implementation plans to establish new operating locations including recommendations of personnel, equipment, security, and transportation requirements. Identify site-specific procedural requirements (ATC, network configurations, etc.) and assist in the creation/alterations of Host Base Agreements, cybersecurity authorizations, etc. Provide personnel, equipment and other resources, as necessary, to operate and control the BACN payload at existing and new operating locations. Provide logistics support for personnel and equipment at existing and new BACN payload operating locations.

Demobilize and remove all equipment from retired BACN operational sites as directed by the Government.

4. Potential Transition to Organic Operations and Sustainment

During the period of performance of this contract, the Government may establish various levels of BACN organic capabilities such as organic BACN payload operator personnel, Organizational-level maintenance capabilities and/or a host base facility. As directed, assist the Government in establishing and transitioning to BACN organic capabilities. Provide facility and supply support recommendations, specialized test and support equipment, training materials and training, and any other required support to establish and implement BACN payload organic capabilities.

Offeror Responses Must Include the Following:

- Identification and description of the offeror's proven fielded or existing advanced prototype system that meets or has the potential to meet all of the current BACN payload technical and functional capabilities.
- A Technical Requirements Level (TRL) assessment of the offeror's system maturity.
- Comparison of the offeror's system capabilities against the payload-specific capabilities identified in the BACN TRD. Comparison must include identification of the capabilities the offeror's system meets and does not meet. Offerors may also address additional capabilities their system provides in addition to the TRD requirements that could enhance BACN mission performance. The TRD is available upon request to potential offerors that submit a request for the TRD to the Government POCs below and possess an appropriate facility clearance. The TRD request must include the information in the two subbullets above along with the offerors CAGE code.
- Description of how the offeror's system capabilities have been verified; i.e., formal Development Test, Operational Test, Exercise, Capability Demonstration or other verification test procedure. Describe how this verification supports your TRL assessment above.
- For potential offerors whose proven fielded or existing advanced prototype systems don't currently meet the full complement of BACN payload technical and functional capabilities, the offeror must provide a ROM estimate of both cost and schedule required to update these systems to achieve a fully TRD-compliant capability.

For purposes of the future BACN Payload Operations and Sustainment contract:

- A description of how and when the offeror could implement a BACN payload into the existing E-11A and EQ-4B platforms or alternative platform(s) to support BACN mission requirements.
- A description of previous, demonstrated experience in operating and sustaining a similarly complex airborne subsystem to include continuity of operations, hardware and software operations, maintenance and sustainment.
- A description of previous experience operating and sustaining a similarly complex system in a wartime environment.
- A preliminary support concept to enable BACN payload operations that meet BACN mission performance requirements including sustainment of the BACN payload and any associated ground and support equipment.
- A description of previous experience in flight-line operations of US military aircraft and pre-flight check-out of on-board mission equipment as well as remote in-flight operations of that equipment (if required to support the BACN payload).
- A description of the offerors ability to satisfy the requirements in the Draft Statement of Objectives above.
- Ability to provide Government Purpose Rights or Unlimited Rights to the proposed BACN payload system.
- Established facility clearance up to TOP SECRET and current COMSEC accounts.
- Program personnel with U.S citizenship and DoD SECRET security clearances.

Other information:

- Not anticipated to be a small business set-aside.
- Not interested in potential E-11A platform maintenance sources as that effort is outside the scope of this notice.
- Not interested in offerors that don't already have proven fielded or advanced prototype systems.

Instructions for Responses

- **Page limit:** Fifteen (15) one-sided pages for the Statement of Qualifications, font no smaller than 11 pt, embedded graphics included in page count with graphics fonts no smaller than 8 pt., all in MS Office 2007 or later products.
    1. Outside of this page count, attachments are permissible. If the potential source foresees the need for particular data from the OEM or Gov't in order to perform the intended tasks, this should be listed in an attachment to the Statement of Qualifications
    2. Total page count including all attachments, single sided, 8.5x11, shall not exceed thirty (30) pages
- Responders should ensure they have clearly addressed the "Offeror Response" requirements listed above in succinct sections of their Statement of Qualifications.
- Responses should also include the following:
    1. Company Name and Cage Code
    2. COMSEC Account number
    3. Is company foreign owned?
    4. Email address and phone number of POC
        - Required to Identify a Program POC as well as a POC authorized to negotiate and enter into contractual obligations with the Government
    5. Suggested NAICS

        - *NAICS code above is currently the Government's intent. If any other NAICS code is believed to be more appropriate, the offeror should state such information with rationale
    6. Business size classification for NAICS and qualifications if any and any sub-category
    7. Your anticipated lead time to be fully capable of performing the basic tasks
- Reponses due not later than 5:00pm EDT, 31 May 2019 to the individuals below.

Responses are to be addressed to the following individuals:

- PCO:
    1. Rachel E. Redfearn, Contracting Officer AFLCMC/HNAK, rachel.redfearn.3@us.af.mil
- Contracts Specialist(s):
    1. Olivia Cerqueira, Contracts Administrator AFLCMC/HNAK, Olivia.cerqueira@us.af.mil
    2. Joseph Pisano, Contracts Administrator, AFLCMC/HNAK, Joseph.Pisano.2@us.af.mil