

N00014-19-R-S003
Long Endurance Advance Off-board Electronic Warfare (AOEW) Platform (LEAP)
Amendment 0001

The purposes of Amendment 0001 to Special Notice N00014-19-R-S003 are to provide the following information:

1.) NOMAD Design Day Workshop Information:

When: 10 June 2019, 1200-1600.

Where: Zenetex, 3rd floor

Address: 44427 Airport road

California, MD 20619

Registration via email to Dr. Phil Knowles (philip.knowles@navy.mil). In the email, include attendee name, company representing, city, state, US citizen (Y/N), email, and phone number. Registrants will receive email confirmation within one business day. Registration will remain open until COB on 7 June 2019 and is open to US citizens only (No Foreign Nationals). Attendance is limited to two participants per organization.

2.) Requesting copies of the Industry Day Briefs:

All interested companies need to provide a request via company letterhead which includes the company's CAGE code to Dr. Phil Knowles (philip.knowles@navy.mil). A PDF signed request on company letterhead is preferred.

ONR will compile a list and send out a DD254 with the classified information to companies that requested copies.

The deadline for requesting copies is 7 June 2019.

3.) Industry Day Q&A:

1. Q: Is the communications link to the ship part of the vehicle or payload?

A: The communication link will reside in the vehicle in order to drive commonality.

2. Q: Is the payload cooling provided by the vehicle or by the payload itself?

A: Per Special Notice, Section II, "Significant co-design is anticipated between the carrier and payload to provide design solutions that meet mission requirements. For instance, to address issues such as RF isolation as well as power and cooling needs, aspects of each Technical Area can influence overall system design," and under TA2, "The payload design will need to address issues including aperture isolation requirements for transmit and receive as well as cooling in conjunction with the TA1 LEAP carrier design team.

3. Q: Would ONR consider a potentially recoverable decoy solution?

A: Per Special Notice, Section II, "This Special Notice seeks to develop concept designs for an **expendable**, long endurance airborne platform decoy."

4. Q: What is the anticipated funding level for the Future Naval Capability (FNC) effort?
A: The LEAP Decoy program is not an approved FNC and no future funding has been authorized. However, FNC funding can range from approximately \$5M-\$15M per fiscal year over three years.
5. Q: Would a single band payload design be responsive?
A: Yes.
6. Q: How does the LEAP program relate to other efforts?
A: The LEAP program is targeting a mission specific capability. While the program will be informed by other efforts such as DARPA ASCOT, there is no requirement for compatibility between LEAP solutions and developments on other efforts.
7. Q: Are potential vehicle designs limited to the size of the chaff launcher or the deck space allocated to the chaff/GIANT launcher?
A: Per Special Notice, Section II, "A launcher that fits within deck space allocated for EW topside equipment aboard the Arleigh Burke Class (DDG 51) and maximizes number of decoys available for use." Also, the Ship integration brief presented height considerations to not interfere with other ship systems.
8. Q: Will new launcher types be considered for this effort?
A: Per Special Notice, Section II, TA-1, "In addition to the carrier decoy air vehicle, the system will include a launcher and ship-board control station. The launcher design will enable the LEAP decoy to effectively deploy within relevant timelines suitable for the threat, as well as fit within the space identified for DDG ship integration."
9. Q: What was the outcome of the Shipboard Electronic Warfare Extended Endurance Decoy (SEWEED) FNC effort?
A: The SEWEED effort concluded upon completion of the preliminary design. Based on evolving mission and payload technology, payload SWAP and overall SEWEED vehicle size can be greatly reduced.
10. Q: How do you define vehicle autonomy and what are the performance expectations?
A: Per Special Notice, Section II, "Autonomous flight control capability, to include collision avoidance, with an ability to accept mission tasking at launch with waypoint updates from a ship-board control station and the ability to reposition and realign to maintain focus on the ASM threats." In addition, Section II also states "ONR seeks to understand how adding advanced autonomous capabilities, such as formation flight, cooperative peer-to-peer communications, and on-board decision making based on organic sensing, may be traded with greater bi-directional communication and shipboard control to drive overall cost." In addition, if communications are interrupted or lost during operation, the vehicle at a minimum will execute the last direction provided for the duration of operation including immediately after launch.
11. Q: Will the Office of Naval Research provide a mission scenario/CONOP?

A: The Office of Naval Research will not provide any specific mission scenarios or CONOP. The Industry Day briefs identified potential threats and notional decoy deployment options to counter potential threats.

12. Q: Is there a required response time for the LEAP decoy?

A: There is not a specific response time requirement. However, it is anticipated that there will be a trade space between response time and cost and proposers should clearly delineate anticipated response time and impact on notional CONOP's in a layered defense strategy.

13. Q: Will Anti-Tampering (AT) factor into the design?

A: AT will be a factor in future designs and program efforts, but the details of how to address AT are not critical for the purpose of this study.

14. Q: Will ONR identify any specific interface standard such as Sensor Open Systems Architecture (SOSA) as part of the study?

A: ONR will not specify any interface standards but encourages each potential bidder to use existing Open Systems Architectures (OSA) standards as much as possible.

15. Q: Are there specific requirements for manual loading/reloading decoys at sea?

A: For the purpose of this study there are no specific reloading requirements, however we are open to obtaining the best value and operational effectiveness for the Government.

16. Q: Does the allowable launcher space include the space allocated for NULKA?

A: No, see answer to question 7.

17. Q: Is there a prioritization of the requirements?

A: There is no prioritization on the requirements. If there is a technical challenge to meeting a requirement, document the challenge.

18. Q: Will the Government define an interface for payload/carrier modularity?

A: Each offeror shall propose an interface between the payload and carrier. It is anticipated that the ultimate interface definition will develop through interaction of the payload and carrier performer(s).

19. Q: How did you measure antenna isolation on NOMAD?

A: Antenna isolation was not directly measured.

20. Q: Is a demonstration necessary for this effort?

A: This effort is a study to inform requirements for a potential follow-on FNC program.

21. Q: Where did the one-hour endurance requirement from?

A: It's based on a mix of raid information and practical expectation.

22. Q: Do we want one proposal from large companies or can multiple proposals be submitted from the same company?
A: We are willing to accept multiple proposals from the same company.
23. Q: Does the Decoy need to fly at ship speeds?
A: Yes, plus environmental considerations (i.e. natural winds).
24. Q: Where does the 20lb payload max weight come from?
A: Capabilities that are achievable.
25. Q: Will LEAP have to find the threat?
A: The LEAP decoy is anticipated to be cued by the Soft Kill Coordination System (SKCS) to a particular threat and sector. The LEAP decoy will be responsible for responding to the threat and evolving threat environment in its targeted sector.
26. Q: What do you see as the toughest part of this effort?
A: There are a number of technical challenges associated with the LEAP program including modularity, payload integration, vehicle performance, autonomy, and cost target.
27. Q: Is a single band a requirement for the payload or is there an advantage to providing more capability?
A: We are open to obtaining the best value for the Government.
28. Q: Is there a minimum TRL that ONR is willing to consider for this effort?
A: The technical maturity of the proposed design is up to each offeror. However, as stated during industry day, information learned during this effort will inform achieving Low Rate Initial Production in the 2026-2027 timeframe.
29. Q: Can we assume a pre-power up sequence prior to the reaction time given?
A: You can make assumptions, just make your assumptions clear.
30. Q: Will the government provide an Interface capability document (ICD) for various ship systems?
A: Per Special Notice, Section II, "At the conclusion of the period of performance, ONR is expecting researchers to deliver preliminary point designs including documentation of:
- Interface capability document (ICD) that supports carrier/payload integration"
31. Q: Is it acceptable to look at other design options, other than NOMAD for TA-1?
A: Yes, ONR has not settled on a particular vehicle design and seeks to consider all viable design options.
32. Q: Modularity between payload and carrier, do we expect them to be flight-line swappable?
A: It is not required as part of this study (see answers to questions 11 and 33 for additional guidance).

33. Q: If more capability than required can be achieved, is that desired?

A: We are open to obtaining the best value for the Government.

34. Q: Does the Government want to see programmatic execution plans in the proposal?

A: The proposed study targets technical information, however technical approaches to overcoming key challenges are valuable to understand.

35. Q: Is the data link part of the platform?

A: Yes.

36. Q: Is DC-DC power conversion required to occur on the payload?

A: You can make assumptions, just make your assumptions clear.

37. Q: Is there a nominal length for NOMAD antenna isolation?

A: You can make assumptions, just make your assumptions clear.

4.) All other terms and conditions remain unchanged.