



Torpedo Advanced Propulsion System (TAPS)

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2) and 35.016, the Department of Defense Grants and Agreements regulations (DoDGARS) 32 CFR 22.315(a) and DoD's Other Transaction Guide for Prototypes Projects, USD(AT&L), OT Guide, Jan 2001. A formal Request for Proposals (RFP), solicitation, and/or additional information regarding this announcement will not be issued.

The Office of Naval Research (ONR) will not issue paper copies of this announcement. The ONR reserves the right to fund all, some, or none of the proposals received under this BAA. ONR provides no funding for direct reimbursement of proposal development costs. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. It is the policy of ONR to treat all proposals submitted under this BAA as sensitive competitive information and to disclose their contents only for the purposes of evaluation. **Hyperlinks have been embedded within this document and appear as underlined, blue-colored words.** The reader may "jump" to the linked section by clicking the hyperlink.

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I. GENERAL INFORMATION

A. Agency Name -

Office of Naval Research,
One Liberty Center
875 N. Randolph Street
Arlington, VA 22203-1995

B. Research Opportunity Title - Torpedo Advanced Propulsion System (TAPS)

C. Program Name – Office of Naval Research (ONR) Future Naval Capabilities Program Power and Energy (P&E) Torpedo Advanced Propulsion System (TAPS), P&E FY17-02

D. Research Opportunity Number - N00014-17-S-B009

E. Response Date -

Full Proposals: 20 March 2017

F. Research Opportunity Description –

Firms wishing to submit proposals must request a classified addendum for information (i.e., threshold and objective metrics) required to prepare a proposal. Attachment 1, Department of Defense Contract Security Classification Specification (DD254) provides required level of facility clearance and level of safeguarding. Section IV. A. of the BAA provides the process for requesting the classified addendum.

The Office of Naval Research (ONR) Code 33 is seeking proposals containing propulsion technologies to extend the range of the current US Navy Heavyweight Torpedo (MK-48 Mod7).

The FY17 Future Naval Capability (FNC) titled “Torpedo Advance Propulsion System” (TAPS) will develop and demonstrate a prototype torpedo propulsion system to evolve the Mk-48 Heavyweight Torpedo into an extended-range weapon. Two specific technologies will be explored: Otto fuel (currently used) and Aluminum –Silver Oxide (Al-AgO) electric propulsion. The following is provided as an informational overview; offerors must be provided a classified addendum with specific threshold and objective metrics. All offeror’s must obtain a Confidential security clearance before they can submit a Full Proposal.

Technology One: Mk-48 Otto Fuel Engine

The Mk-48 afterbody/tailcone (AB/TC) contains the engine, accessories (fuel pump, hydraulic pump, etc.) and the steering assembly. The Mk-48 engine is a six-cylinder swash-plate design, which is a type of reciprocating piston engine that replaces the common crankshaft with a circular plate. Piston forces act on this non-rotating “wobble plate” in a circular sequence,

forcing the plate to nutate around its center, applying force to the angled swash-plate that forces the driveshaft to rotate. The key advantage of the design is that the piston cylinders are arranged parallel to the driveshaft around the edge of the plate, rather than perpendicular to the shaft, as in crankshaft engines. This results in a very compact, cylindrical engine.

The Mk-48 uses Otto Fuel, a non-explosive, shock-insensitive, liquid monopropellant designed for torpedo application. In most liquid monopropellants, the combination of fuel and oxidizer produces a potential for an explosive hazard. Otto Fuel, however, has passed all required safety testing for submarine and surface ship applications. As such, modification or substitution of the fuel is not part of this request.

This BAA is interested in increasing the range of the existing torpedo by reducing the engine power levels. This can be accomplished by either of the two methods described below – Increasing combustion efficiency or developing a new external engine. Either of these approaches must take into account engine accessories (fuel pump, hydraulic pump, coolant pump and alternator). Currently, the accessories are driven off of the forward end of the engine and it is assumed a new engine would require this same configuration, but alternative configurations may be proposed. The horsepower (HP) ranges of interest for these accessories are listed in Table 1.

Table 1 – Mk-48 Otto Fuel Engine System Concept Attributes

Engine Shaft	See Classified Addendum
Total Accessories	10 to 80 HP
Coolant Pump	1 HP (constant)
Hydraulic Pump	5 HP (constant)
Fuel Pump	1 to 40 HP
Alternator	10 to 30 HP

Due to the short timeframe of less than two years for Phase I (Base and Option 1) of this FY17 Future Naval Capability, this BAA is limited to the following two areas:

Increasing Combustion Efficiency: Propose modifications to the combustion chamber to increase the overall efficiency of the combustion process. The changes could include, but are not limited to:

- Material change to minimize heat transfer and cooling effects in combustor
- Increase in residence time within the combustor
- A change in droplet size/atomization over the wide range in power levels

These changes must be maintained within the physical constraints of the existing torpedo (right circular cylinder, 18.5” diameter and 72” length).

New External Combustion Engine: Propose a new engine that operates more efficiently over the power levels desired. These changes must conform to the physical dimensions and engine specifications (per the information provided in the classified addendum) of the current torpedo for shock and vibration requirements, hot/cold storage and operating condition.

Technology Two: Al-AgO Electric Power System

An alternative to the current Mk-48 engine would be an electric propulsion system that leverages advancements in seawater-activated battery systems. Of interest is an Al-AgO technology, which has been previously demonstrated as safe in torpedo applications.

To support the FNC program schedule, the battery system and balance-of-plant components need to be at, or above, Technology Readiness Level 4 (TRL) at the start of the program and be at TRL 6 and the end of the program. High energy density and efficiency during low-power operation with a high-power capability for burst operation is needed. Specifically for Al-AgO battery technology, a low leakage current design that minimizes the corrosion reaction will be required for efficient operation at low power. Batteries suitable for long-term storage and submarine safety certification, including thermal batteries used for power during torpedo start up, need to supply power to the propulsion motor, circulation pump and vehicle electronics during activation of the Al-AgO system. The system must have hazards identified and be able to obtain weapon systems safety certification.

In order to maintain battery performance over the entire run duration, an efficient electrolyte management system (EMS) is required to be integrated with the battery cartridge and the balance of plant components. Critical to the system is a quiet electrolyte circulation pump and motor and system designs to minimize flow noise. Sensors may be required for real-time monitoring of critical electrolyte species (conductivity, viscosity and temperature). A system is needed to store high-concentration replenishment electrolyte and supply it at a controlled, variable rate. A hydrogen gas-liquid separator with high efficiency over a wide flow range will be needed. A heat exchanger and thermal control valve(s) are required for operation at multiple electrolyte temperatures to reject waste heat from the system.

An electric propulsion motor that will operate within the battery voltage range and power range is needed. The motor topologies can be radial, axial flux or any viable topology. Proposers shall include a rationale for the motor topology they select. Designs that minimize acoustic and electromagnetic signature are needed. The motor shall have sufficient torque capability at low power (i.e. low shaft speed). Cooling required for the motor shall be included in the afterbody section.

Table 2 lists high-level electric power system concept attributes. The minimum and maximum operating voltage must be maintained for the duration of the mission. All emerging technologies should be at the TRL 3 and above level in order to meet future integration plans should this concept move forward.

Table 2 – Electric Power System Concept Attributes

Min operating voltage:	300 VDC
Max operating voltage:	600 VDC
Low power:	15 kW
High power:	300 kW
Min Energy:	80 kWh

Weight limit	1500 lbs*
Energy section envelope	Right circular cylinder with a 18.5” diameter and 72” length
SUBSAFE	Meet current certification
Shelf life	10-year stowage capability with allowed refueling prior to submarine load out
Environmental operating/stowage	Current
Signature (acoustic and electromagnetic radiation)	No worse than current

**Weight limit includes the battery system and prime mover*

Program Plan

The program includes two phases: Phase I (Contract Base Period and Option 1) and Phase II.

Section V “Evaluation Information” summarizes the Government’s approach for award of the base contract and the exercise of Option I arising from this BAA. The subsequent evaluation and award of Phase II and should be read carefully prior to preparing proposals.

Phase I Base (up to 18 months):

The Phase I Base research must meet at a minimum, the threshold metrics listed in the classified addendum and the attributes listed in Table 1 (for technology one) and Table 2 (for technology 2).

Scope:

- Conduct subscale component, or full-scale critical component and integration testing and analysis or both as dictated by the proposed design as a basis to meet at a minimum the classified addendum threshold metrics at a TRL 4 system level demonstration. Integration of the major components must be part of the system demonstration. A matrix listing all test parameters and test conditions of component and full- scale testing shall be provided in the proposal.
- Develop a preliminary Propulsion System 3D CAD-based Solid Model demonstrating attainment of the performance specifications.
- Demonstrate via analysis and documentation the safe and reliable operation via a Preliminary Hazards Analysis (PHA) for both component level hardware and systems level hardware. This will include identification and control of hazards, subsequent risk assessment and the necessary mitigation/countermeasure strategies to eliminate/control those hazards as necessary to manage those risks at an acceptable level.

Deliverables:

- Monthly Technical Reports
- Monthly Financial Reports
- Preliminary Hazard/Safety Analysis using MIL-STD- 882 (series) as guidance. Format shall be in accordance with DI-SAFT 80101 (series).
- Preliminary System Design
- Preliminary Design Review
- Final Report that includes a table of all system components, specifying TRLs and, as appropriate, weights, volumes, dimensions, flow rate, voltage and other pertinent engineering design data. Phase II Plan of Action (including a prioritized list of risks associated with the Phase II final system and component rough order of magnitude (ROM) cost); due 30 days prior to the end of the contract
- A 3D solid model of a full scale propulsion system in one of the following CAD universal exchange formats:
 - STEP (214)
 - IGESPropulsion System layout drawings of critical components, interfaces and subsystems integrated into the hull; this would be 2-D Level I drawings at a minimum. Use both .dxf and .pdf formats

Phase I Option (6 months):

Scope:

- Finalize the design and initiate full-scale system component procurement for the Phase II demonstration, final BOP integration strategy and the test plan detailing the conditions for the final TRL 6 demonstration.
- Conduct Critical Design Review
Conduct system level cost analysis, including up front (capital cost) and life cycle cost.

Deliverables:

- Monthly Technical Reports
- Monthly Financial Reports
- 3-D solid model of a full scale propulsion system in one of the following CAD universal exchange formats:
 - STEP (214)
 - IGES
- Propulsion System- layout drawings of critical components, interfaces and subsystems integrated into the hull; these would be 2-D Level I drawings at a minimum. Use both .dxf and .pdf formats.
- Prioritized list of Phase II risk and mitigation strategies

- Table of final system components with weights, volumes, and associated cost
- Final Report
- Phase II Technical and Cost Proposal
- Hardware from TRL 4 demonstration test

Phase II (up to 24 months): Phase II consists of integrated full-scale system testing, at a TRL 6 land-based demonstration in a Mk-48 propulsion section. Section hull and interface documentation will be provided as GFE/GFI.

Scope:

- Full scale system integration into a Mk-48 propulsion section.
- Land-based (TRL 6) test demonstration of the OBJECTIVE metrics from the classified addendum.
- Develop all necessary Standard Operating Procedures (SOPs), operating manuals, maintenance schedules, a detailed system flow and instrumentation schematic to show the functional relationship of piping, instrumentation and system equipment components, and a parts list for the propulsion system (this system package will be a deliverable).

Deliverables:

- Monthly Technical Reports
- Monthly Financial Reports
- Final Report (along with the summary of all the test results, this report shall also include recommendations necessary to further mature the technology, such as component risks that need further development/testing, component system reliability, and component system manufacturing improvements.
- 3-D Solid model of a full scale propulsion system in one of the following CAD universal exchange formats:
 - STEP (214)
 - IGES
- Detailed Design Package, containing Level II 2-D drawings and an accompanying parts list. Use both .dxf and .pdf formats.
- Propulsion system layout drawings of critical components, interfaces and subsystems integrated into the hull; these would be 2-D Level I drawings at a minimum. Use both .dxf and .pdf formats.
- Standard Operating Procedures (SOPs), operating manuals, maintenance schedules.
- Piping and Instrumentation Diagram (P&ID) schematic illustrating the functional relationship of piping, instrumentation and system equipment
- Hazards Assessment using MIL-STD-882D as guidance. Format shall be in accordance with DI-SAFT 80101B (links available in Appendix B).

- Full scale system integrated into a Mk-48 propulsion section hull and tested.
- Hardware of the TRL 6 system demonstration

G. Point(s) of Contact -

Comments or questions submitted should be concise and to the point. The relevant part and paragraph of the Broad Agency Announcement (BAA) should be referenced.

Questions of a **business** nature, and suggestions for improvement, should be submitted to:

Point of Contact Name: AnShawn Lewis
Point of Contact Occupation Title: Contract Specialist
Division Title: C4ISR & Sea Warfare Contracts Branch
Division Code: 252
Address: 875 N. Randolph St, Arlington, VA 22203
Email Address: anshawn.lewis@navy.mil

Alternate Point of Contact Name: Susan Paolini
Point of Contact Occupation Title: Contracting Officer
Division Title: C4ISR & Sea Warfare Contracts Branch
Division Code: 252
Address: 875 N. Randolph St, Arlington, VA 22203
Email Address: susan.paolini@navy.mil

Questions of a technical nature should be submitted to the Technical Point of Contact, with a copy to the business point of contact listed above:

Name: Ms. Maria Medeiros
Title: Program Manager
Division Title: Undersea Weapons Programs
Division Code: 333
Address: 875 N. Randolph St, Arlington, VA 22203
Email Address: maria.medeiros1@navy.mil

Questions of a Security nature should be submitted to:

Torri Woodfolk
Industrial Security Specialist
Office of Naval Research
Security Department, Code 43
One Liberty Center
875 North Randolph St.
Arlington, VA 22203-1995
Email Address: torri.powell@navy.mil

The Office of Naval Research (ONR) has assembled a package of materials for the Torpedo Advanced Propulsion System (TAPS) BAA N00014-17-S-B009. The package shall be issued on CD ROM, paper or “classified email via” SIPRNet and will include classified and ITAR restricted materials. In order to receive these materials potential offerors must possess a CONFIDENTIAL facility clearance with CONFIDENTIAL safeguarding and be registered with the Joint Certification Program (JCP). The package shall be provided on CD ROM, paper or “classified email via” SIPRNet to potential offerors upon request via E-mail to Torri Woodfolk at torri.powell@navy.mil. All requests should include company name, company cage code, company classified mailing address, JCP custodian's Point of contact information (unclassified mailing address, email, telephone), and the Technical Point of contact who will ultimately receive the documents.

If your classified mailing address listed on the Industrial Security Facilities Database is a Post Office Box and you would like to receive the GFI via FEDEX, please include your alternate security shipping address in your request. Offerors shall provide information to demonstrate that they currently possess a CONFIDENTIAL facility clearance with CONFIDENTIAL safeguarding and are registered with the Joint Certification Program. ONR will use this information to verify eligibility to receive ITAR restricted and classified information.

ONR intends to provide packages to offerors in the order in which requests are received.

Note: All UNCLASSIFIED communications shall be submitted via e-mail to the Technical Point of Contract (POC) with a copy to the designated Business POC.

CLASSIFIED questions shall be handled through the ONR Security POC. Specifically, any entity wanting to ask a CLASSIFIED question shall send an UNCLASSIFIED email to the ONR Security POC with a copy to both the Technical POC and the Business POC stating that the entity would like to ask a CLASSIFIED question. DO NOT EMAIL ANY CLASSIFIED QUESTIONS. The Security POC will contact the entity and arrange for the CLASSIFIED question to be asked through a secure method of communication.

Questions submitted within 2 weeks prior to a deadline may not be answered, and the due date for submission of the full proposal will not be extended.

Amendments to this BAA will be posted to one or more of the following web pages:

- Federal Business Opportunities (FedBizOpps) Webpage – <https://www.fbo.gov/>
- ONR Broad Agency Announcement (BAA) - <http://www.onr.navy.mil/en/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx>

H. Instrument Type(s) –

The Government intends to award **contracts** only under this BAA. Grants will not be awarded.

Any contract award resulting from this BAA will incorporate the most current FAR, DFARS, NMCARS and ONR clauses.

Examples of model contracts can be found on the ONR website at the following link: <http://www.onr.navy.mil/Contracts-Grants/submit-proposal/contracts-proposal/contract-model-awards.aspx>. ONR Contract specific representations and certifications can be accessed on the following page of the ONR website: <http://www.onr.navy.mil/en/Contracts-Grants/submit-proposal/contracts-proposal.aspx>.

The model contracts at the link above are provided only as examples. In the event of any conflict between these examples and current FAR, DFARS, NMCARS, or ONR clauses, current FAR, DFARS, NMCARS, or ONR clauses will govern.

I. Catalog of Federal Domestic Assistance (CFDA) Numbers – RESERVED

J. Catalog of Federal Domestic Assistance (CFDA) Titles - RESERVED

K. Other Information –

This BAA is intended for proposals related to applied and advanced technology development (Budget Activity 2 and 3) and that part of development not related to the development of a specific system or hardware procurement. The Government does not anticipate fundamental research or the award of grants under this effort. With regard to any restrictions on the conduct or outcome of work funded under this BAA, ONR will follow the guidance on and definition of “contracted fundamental research” as provided in the Under Secretary of Defense (Acquisition, Technology and Logistics) Memorandum of 24 May 2010.

As defined therein the definition of “contracted fundamental research,” in a DoD contractual context, includes research performed under contracts that are (a) funded by Budget Activity 2 (Applied Research) and (b) Budget Activity 3 (Advanced Technology Development). The research shall not be considered fundamental in those rare and exceptional circumstances where the applied research effort presents a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense, and where agreement on restrictions have been recorded in the contract or grant.

Pursuant to DoD policy, research performed under contracts that are a) funded by Budget Activity 2 (Applied Research) and NOT performed on-campus at a university or b) funded by Budget Activity 3 (Advanced Technology Development) does not meet the definition of “contracted fundamental research.” In conformance with the USD (AT&L) guidance and National Security Decision Directive 189, ONR will place no restriction on the conduct or reporting of unclassified “contracted fundamental research,” except as otherwise required by statute, regulation or executive order. For certain research projects, it may be possible that although the research being performed by the prime contractor is restricted research, a subcontractor may be conducting “contracted fundamental research.” In those cases, it is the *prime contractor’s responsibility* in the proposal to identify and describe the subcontracted unclassified research and include a statement confirming that the work has been scoped, negotiated, and determined to be fundamental research according to the prime contractor and research performer.

Normally, fundamental research is awarded under grants with universities and under contracts with industry. Non-fundamental research is normally awarded under contracts and may require restrictions during the conduct of the research and DoD pre-publication review of such research results due to subject matter sensitivity. Potential offerors should consult with the appropriate ONR Technical POCs to determine whether the proposed effort would constitute basic research, applied research or advanced research.

FAR Part 35 restricts the use of Broad Agency Announcements (BAAs), such as this, to the acquisition of basic and applied research and that portion of advanced technology development not related to the development of a specific system or hardware procurement. Contracts made under BAAs are for scientific study and experimentation directed towards advancing the state of the art and increasing knowledge or understanding.

This BAA topic covers export controlled technologies. Research in these areas is limited to "U.S. persons" as defined in the International Traffic in Arms Regulation (ITAR) - 22 CFR § 1201.1 et seq. Additionally, since access to US Navy and other access controlled research facilities will be required, All Key Personnel for each proposer must be United States citizens. Proposers must possess an active PKI certificate (External Certificate Authority) from 30 days after contract award through the duration of the performance period. This is required for access to a government run sharepoint site for report and briefing materials submission

THIS ANNOUNCEMENT IS NOT FOR THE ACQUISITION OF TECHNICAL, ENGINEERING AND OTHER TYPES OF SUPPORT SERVICES.

II. AWARD INFORMATION

It is anticipated that cost-type contracts will be awarded for Phase I (Contract Base Period and Contract Option 1) and subsequently, for work under Phase II.

a) Funded Amount and Period of Performance-

Total Amount of Funding Available: \$25M for total Program (Phase I Base and Option I awarded under this BAA, and Phase II)

Anticipated Number of Awards: ONR anticipates that multiple awards will result from this BAA

Anticipated Range of Individual Award Amounts: The typical award will likely be in the range of \$500K to \$4,000K per year, but awards outside this range are also possible.

Anticipated Period of Performance: The program will consist of two total phases:

Phase I: Base Period with an estimated period of performance of eighteen (18) months; Option Period with an estimated period of performance of six (6) months. Under Option 1; The government shall have four months after the expiration of Option Period 1 to decide whether to award the Contractor a Phase 2 contract. If the government elects to make such an award, it may do so within the four-month period by either amending this contract or awarding a separate contract.

- Phase II with an estimated period of performance of up to twenty-four (24) months.

B. Peer Reviews- N/A

C. Production and Testing of Prototypes-

ONR may modify a contract awarded under this BAA to add a contract line item or contract option for the provision of advanced component development or for the delivery of an initial or additional prototype units. However, such a contract addition shall be subject to the limitations contained in Section 819 of the National Defense Authorization Act (NDAA) for Fiscal Year 2010, as modified in Section 811 of the NDAA for Fiscal Year 2015.

The Naval Undersea Warfare Center-Division Newport (NUWC-DIVNPT) will be the Navy Laboratory that will conduct the integration and testing of the Phase II system demonstration(s). NUWC-DIVNPT test facilities will also be available to test system components during Phase I Base and Option I.

III. ELIGIBILITY INFORMATION

***All potential offeror's must possess a CONFIDENTIAL facility clearance with CONFIDENTIAL safeguarding and be registered with the Joint Certification Program.**

- A. All responsible sources from academia and industry may submit proposals under this BAA. Historically Black Colleges and Universities (HBCUs) and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals. However, no portion of this BAA will be set aside for Small Business or other socio-economic participation. All businesses both small and large are encouraged to submit proposals and compete for funding consideration.
- B. Federally Funded Research & Development Centers (FFRDCs), including Department of Energy National Laboratories, **are not** eligible to receive awards under this BAA. However, teaming arrangements between FFRDCs and eligible principal Offerors are allowed so long as such arrangements are permitted under the sponsoring agreement between the Government and the specific FFRDC.
- C. Navy laboratories, military universities and warfare centers as well as other Department of Defense and civilian agency laboratories are also not eligible to receive awards under this BAA and should not directly submit either white papers or full proposals in response to this BAA. If any such organization is interested in one or more of the programs described herein, the organization should contact an appropriate ONR Technical POC to discuss its area of interest. The various scientific divisions of ONR are identified at <http://www.onr.navy.mil/>. As with FFRDCs, these types of federal organizations may team with other eligible sources from academia and industry that are submitting proposals under this BAA.
- D. University Affiliated Research Centers (UARC)s are eligible to submit proposals under this BAA unless precluded from doing so by their Department of Defense UARC contract.

- E. Teams are also encouraged and may submit proposals in any and all areas. However, Offerors must be willing to cooperate and exchange software, data and other information in an integrated program with other contractors, as well as with system integrators, selected by ONR.
- F. Offerors should be aware of recent changes in export control laws. Offerors are responsible for ensuring compliance with all International Traffic in Arms Regulation (ITAR)(22 CFR §120 *et. seq.*) requirements, as applicable. In some cases, developmental items funded by the Department of Defense are now included on the United States Munition List (USML) and are therefore subject to ITAR jurisdiction. Offerors should address in their proposals whether ITAR restrictions apply or do not apply, such as in the case when research products would have both civil and military application, to the work they are proposing to perform for ONR. The USML is available online at <http://www.ecfr.gov/cgi-bin/text-idx?node=pt22.1.121> . Additional information regarding the President's Export Control Reform Initiative can be found at <http://export.gov/ecr/index.asp>.

Offerors must comply with all U.S. export control laws and regulations, including the ITAR and EAR, in the performance of any award or agreement resulting from this BAA. Offerors shall be responsible for obtaining any required licenses or other approvals, or license exemptions or exceptions if applicable, for exports of hardware, technical data, and software (including deemed exports), or for the provision of technical assistance.

- G. Cost sharing is not expected and will not be used as a factor during the merit review of any proposal hereunder. However, the Government may consider voluntary cost sharing if proposed.

IV. APPLICATION AND SUBMISSION INFORMATION

A. Application and Submission Process -

* The Office of Naval Research (ONR) has assembled a package of materials for the Torpedo Advanced Propulsion System (TAPS) BAA N00014-17-S-B009. The package will include classified and ITAR restricted materials. In order to receive these materials potential offerors must possess a CONFIDENTIAL facility clearance with CONFIDENTIAL safeguarding and be registered with the Joint Certification Program (JCP). The package shall be provided on CD ROM, paper or "classified email via" SIPRNet to potential offerors upon request via E-mail to Torri Woodfolk at torri.powell@navy.mil. All requests should include company name, company cage code, company classified mailing address, JCP custodian's Point of contact information (unclassified mailing address, email, telephone), and the Technical Point of contact who will ultimately receive the documents.

If your classified mailing address listed on the Industrial Security Facilities Database is a Post Office Box, please include your alternate security shipping address in your request to receive the GFI via FEDEX. Offerors shall provide information to demonstrate that they currently possess a CONFIDENTIAL facility clearance with CONFIDENTIAL safeguarding and are registered with the Joint Certification Program. ONR will use this information to verify eligibility to receive ITAR restricted and classified information. The request must come from your Joint Certification Program

(JCP) Custodian who is responsible for administering and maintaining your company's JCP certification. To find your Custodian's Point of Contact (POC) information, please go to the JCP website (<https://www.dlis.dla.mil/JCP/search.aspx>) and search using your Company Cage Code number.

Please send only one request per company. ONR intends to provide packages to offerors in the order in which requests are received.

Full Proposals: The due date for receipt of Full Proposals is 2:00 PM (Local time, Washington, D.C.) on Monday, March 20, 2017. It is anticipated that final selections will be made within 30 days after full proposal submission. As soon as the final full proposal evaluation process is completed, PI's will be notified via email of their project's selection or non-selection for FY17 funding.

B. Content and Format of Full Proposals -

a) **Application and Submission Process:** Full proposals are required for submission

b) **Content and Format of Full Proposals -**

Full Proposals submitted under this BAA are expected to be classified. If a classified proposal is submitted and selected for award, the resultant contract is expected to be unclassified. An 'unclassified', non-proprietary Statement of Work (SOW) must accompany any classified proposal.

Do not put proprietary data or markings in or on the Statement of Work. For proposals containing data that the offeror does not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, the contractor shall mark the title page with the following legend:

“This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part--for any purpose other than to evaluate the proposal. If, however, a contract is awarded to this offeror as a result of--or in connection with-- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in (insert numbers or other identification of sheets).”

Also, mark each sheet of data that the offeror wishes to restrict with the following legend:

“Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.”

Titles given to the Full Proposals should be descriptive of the work they cover and should not be merely a copy of the title of this solicitation.

1. Special Instructions for Classified Full Proposal:

Classified proposals shall be submitted directly to the attention of ONR's Document Control Unit at the following address and marked in the following manner:

OUTSIDE ENVELOPE
(no classification marking):

“Office of Naval Research
Attn: Document Control Unit
ONR Code 43
875 North Randolph Street
Arlington, VA 22203-1995”

The inner wrapper of the classified Full Proposal should be addressed to the attention of the cognizant TPOC, ONR Code 33 and marked in the following manner:

INNER ENVELOPE
(stamped with the overall classification of the material)

“Torpedo Advanced Propulsion System (TAPS)
Office of Naval Research
ATTN: Ms. Maria Medeiros
ONR Code: 333
875 North Randolph Street
Arlington, VA 22203-1995”

All proposal submissions will be protected from unauthorized disclosure in accordance with FAR Subpart 15.207, applicable law, and DoD/DoN regulations. Offerors are expected to appropriately mark each page of their submission that contains proprietary information.

FULL PROPOSALS

1. Offerors shall submit full technical and cost proposals for Phase I Base and Phase I Option.
2. Offerors shall submit a notional proposal for Phase II effort that shall include a preliminary description of their anticipated Phase II effort. Offerors shall address how they will meet the Objective metrics (listed on the classified addendum) and System Attributes (Section F) and provide a ROM Phase II cost estimate including the basis of estimate.

i. INSTRUCTIONS FOR CONTRACT, COOPERATIVE AGREEMENTS AND OTHER TRANSACTION AGREEMENTS (Does not include Grants)

Proposal Package:

The following five documents with attachments comprise a complete proposal package:

- (1) Proposal Checklist (.pdf)

- (2) Technical Proposal Template (.pdf) – limit 20 pages
- (3) Cost Proposal Spreadsheet (Excel): Unlimited
- (4) Adequacy Checklist for Pre Award Audit (SF 1408) (as applicable)
- (5) Stand-alone non-proprietary Statement of Work (SOW) in Word
- (6) ONR Representation and Certifications

NOTE: The electronic file name for all documents submitted under this BAA must not exceed 68 characters in length, including the file name extension.

Items 1 – 6 above are located at: <http://www.onr.navy.mil/Contracts-Grants/submit-proposal/contracts-proposal/>. All have instructions imbedded into them that will assist in completing the documents. Also, both the Proposal Checklist and the Cost Proposal Spreadsheet require completion of cost-related information. Please note that attachments can be incorporated into the Proposal Checklist.

The format requirements for attachments are as follows:

- Paper Size- 8.5 x 11 inch paper
- Margins – 1 inch
- Spacing- single or double spaced
- Font- Times New Roman, 12 point

Offerors responding to this BAA must submit a separate list of all technical data or computer software that will be furnished to the Government with other than unlimited rights. The Government will assume unlimited rights if offerors fail to identify any intellectual property restrictions in their proposals. Include all proprietary claims to results, prototypes, and deliverables. If no restrictions are intended, then the offeror should state “NONE.” Offerors shall ensure that any IP assertions are clearly delineated and well substantiated, and any Licensing Terms are clear and enforceable.

Offers must identify in their proposal if NUWC-DIVNPT facilities will be needed for the component testing during Phase I base and Option I phases of their proposal.

Offerors shall describe current and prior experience in similar efforts and provide name, organization, and contact information for other Government sponsors.

For proposals below the simplified acquisition threshold (less than or equal to \$150K), the Technical Proposal Template and Proposal Checklist documents, and the Cost Proposal Spreadsheet are required. Purchase orders can also contain options, as long as the total amount of the base and all options does not exceed \$150K.

For proposed subcontracts or interorganizational transfers over \$150,000, Offerors must provide a separate fully completed Cost Proposal Spreadsheet in support of the proposed costs. This spreadsheet, along with supporting documentation, must be provided either in a sealed envelope with the prime’s proposal or via e-mail directly to both the Program Officer and the Business Point of Contact at the same time the prime proposal is submitted. The e-mail should identify the proposal title, the prime Offeror and that the attached proposal is a subcontract, and should include a description of the effort to be performed by the subcontractor.

Offerors must submit one (1) original, plus two (2) hard copies of their Technical and Cost Proposal package, and one (1) electronic copy on a CD-ROM/DVD.

The electronic copy should be submitted in a secure, pdf-compatible format, except for the electronic file of the Cost Proposal Spreadsheet which must be submitted in a Microsoft Excel 2010 compatible format and the Statement of Work Template which must be submitted in Microsoft Word format. All attachments to any required proposal documents should be submitted in a secure, pdf-compatible format.

The secure pdf-compatible format is intended to prevent unauthorized editing of the proposal prior to any award. A password should not be required for opening the proposal document, but the Government must have the ability to print and copy text, images, and other content. Should an Offeror amend its proposal, the amended proposal should be submitted following the same hard and electronic copy guidance applicable to the original proposal.

Any proposed options that are identified in the Technical Proposal Template or Proposal Checklist documents, but are not fully priced out in the Cost Proposal Spreadsheet, will not be included in any resulting contract, cooperative agreement, or other transaction. If proposing options, they **must** be separately priced and separate spreadsheets should be provided for the base period and each option. In addition to providing summary by period of performance (base and any options), the Contractor is also responsible for providing a breakdown of cost for each task identified in the Statement of Work. The sum of all costs by task worksheets **MUST** equal the total cost summary.

The electronic submission of the Excel spreadsheet 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 Offeror should not provide “value only spreadsheets” similar to a hard copy.

Fixed Fees on ONR Contracts: The Government Objective is set in accordance with the DFARS 215.404-71. See the below table for range and normal values:

Contract Risk Factor	Contract Type	Assigned Value (Normal range)	Normal Value
Technical (1)		3% - 7% (2)	5%
Management/Cost Control (1)		3% - 7% (2)	5%
Contract Type Risk	Firm Fixed Price	2% - 6% (3)	3% - 5% (4)
Contract Type Risk	Cost Plus Fixed Fee	0% - 1% (2)	0.5%

- (1) Assign a weight (percentage) to each element according to its input to the total performance risk. The total of the two weights equal 100%
- (2) Assign a weighting score relative to the Risk Factor.
- (3) Depends on the specific Contract Type (With/without financing, performance-based payments, and/or progress payments).
- (4) Depends on the specific Contract Type.

Technology Incentive (TI) is rarely utilized at ONR, because the contracts issued by ONR typically are not eligible for TI (See DFARS 215.404-71-2(c) (2)). Any consideration of TI requires strong and convincing justification in the proposal, which are then subject to negotiation

and determination of a fair and reasonable fee, within the context of the specific award.

Typically the range of fee is 5% to 7.5% on an ONR awarded contract.

For submission instructions, see Section F “[Submission of Full Proposals for Contracts, Cooperative Agreements, and Other Transaction Agreements](#)”.

C. Significant Dates and Times -

This announcement will remain open until 16 March 2017 or until replaced by a successor BAA, whichever occurs first. Proposals may be submitted any time during this period.

Anticipated Schedule of Events		
Event	Date (MM/DD/YEAR)	Time (Local Washington, D.C. Time)
Full Proposals Due Date	03/20/2017	2 PM
Notification of Selection for Award *	04/17/2017	
Contract Awards*	09/18/2017	
Kickoff Meeting*	Early October	

* - These dates are estimates as of the date of this announcement.

C. Submission of Late Proposals

Any proposal, modification, or revision, that is received at the designated Government office after the exact time specified for receipt of proposals is “late” and will not be considered unless it is received before award is made, the contracting officer determines that accepting the late proposal would not unduly delay the acquisition and

- (a) If it was transmitted through an electronic commerce method authorized by the announcement, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or
- (b) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of proposals and was under the Government’s control prior to the time set for receipt of proposals; or
- (c) It was the only proposal received.

However, a late modification of an otherwise timely and successful proposal that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

Acceptable evidence to establish the time or receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the Government office designated for receipt of proposals by the exact time specified in the announcement, and urgent Government requirements preclude amendment of the announcement closing date, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the announcement on the first work day on which normal Government processes resume.

The contracting officer must promptly notify any offeror if its proposal, modifications, or revision was received late and must inform the offeror whether its proposal will be considered.

E. Submission of Grant Proposals through Grants.gov: RESERVED

F. Submission of Full Proposals for Contracts, Cooperative Agreements, and Other Transaction Agreements.

Full Proposals except classified proposals must be mailed (two paper copies and a CD/DVD) to Ms. Maria Medeiros at the following address:

Office of Naval Research
Attn: Ms. Maria Medeiros
ONR Department Code: 333
875 North Randolph Street
Arlington, VA 22203-1995

V. EVALUATION INFORMATION

A. Evaluation Criteria –

Awards under this BAA will be made in accordance with FAR 35.016(e). The primary basis for selecting proposals for acceptance will be technical, importance to agency programs, and fund availability. Cost realism and reasonableness will also be considered when selecting proposals. ONR reserves the right to request and require any additional information and documentation after it makes the award instrument determination. ONR reserves the right to remove Offerors from award consideration when the parties fail to reach agreement on award terms, conditions, and cost/price within a reasonable time, or when the Offeror fails to timely provide requested or required additional information. The following criteria, all being of equal value, will be used for the technical evaluation:

Offerors' proposals will be evaluated against the following criteria:

1) Overall scientific and technical merits of the proposal and responsiveness to the topic (i.e., the degree of innovation, soundness of technical concept, Offeror's awareness of the state of the art and understanding of the scope of the problem, significance and originality of the technical approach and effort needed to address/solve the problem, and anticipated scientific impact within the field.

The following areas will also be considered:

- (a) the Offeror's capabilities, related experience, facilities, techniques or unique combinations of these which are integral factors for achieving the proposal objectives, and
- (b) the qualifications, capabilities and experience of the proposed Principal Investigator

(PI), team leader and key personnel who are critical to achieving the proposal objectives. This includes the ability to meet attributes as per Section F, Research Opportunity Description and the metrics per Classified Addendum and the ability to manage the cost and schedule.

2) Potential Naval relevance and contribution to the ONR and Department of Navy mission. This factor includes the technology's potential for successful transition to production once the technology is proven. For the purposes of this BAA, a critical aspect of successful transition is upfront planning, acknowledging and resolving all aspects of IP rights.

3) The availability of funds.

Criteria 1, 2, and 3 are equally important.

Proposals will not be evaluated against each other since they are not submitted in accordance with a common work statement. ONR's intent is to review proposals as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons.

The ultimate recommendation for award of proposals is made by ONR's scientific/technical community. Recommended proposals will then be forwarded to the ONR Contracts and Grant Awards Management office. Any notification received from ONR that indicates that the Offeror's full proposal has been recommended does not ultimately guarantee an award will be made. This notice indicates that the proposal has been selected in accordance with the evaluation criteria stated above and has been sent to the Contracting Department to conduct cost analysis, determine the offeror's responsibility, to confirm whether funds are available, and to take other relevant steps necessary prior to commencing negotiations with the offeror.

B. Commitment to Small Business- (For Contract Awards Only)

The Office of Naval Research is strongly committed to providing meaningful prime and subcontracting opportunities for small businesses, small disadvantaged businesses (SDBs), woman-owned small businesses (WOSBs), historically underutilized business zone (HUBZone) small businesses, veteran-owned small business (VOSBs), service disabled veteran-owned small businesses (SDVOSBs), historically black colleges and universities, and minority institutions, and other concerns subject to socioeconomic considerations through its awards.

Businesses unfamiliar with doing business with the government and that require assistance may contact the state-specific Department of Defense (DoD) Procurement Technical Assistance Center (PTAC). DoD PTACs serve as a resource for businesses pursuing and performing under contracts with DoD, other federal agencies, state and local governments and with government prime contractors. Assistance provided by the PTACs is usually free of charge. PTAC support includes registration in systems such as SAM, identification of contract opportunities, understanding requirements and preparing and submitting proposals. The PTACs have a presence in each state, Puerto Rico and Guam. To locate a local PTAC visit: <http://www.dla.mil/SmallBusiness/Pages/ProcurementTechnicalAssistanceCenters.aspx> or <http://www.aptac-us.org/new/>.

1) Subcontracting Plan - For proposed contract awards exceeding \$700,000, large businesses and non-profits (including educational institutions) shall provide a Subcontracting Plan

(hereafter known as ‘the Plan’) that contains all elements required by FAR Subpart 19.704, FAR 52.219-9 and as supplemented by DFARS 252.219-7003.

NOTE: Small businesses are exempt from this requirement to submit a subcontracting plan.

The Plan must be submitted as an attachment to the “Proposal Checklist” and will not be included in the page count. If a company has a Master Subcontracting Plan, as described in FAR 19.701 or a Comprehensive Subcontracting Plan, as described in DFARS 219.702, a copy of the Plan shall also be submitted as an attachment to the “Proposal Checklist”. Plans will be reviewed for adequacy, ensuring that the required information, goals, and assurances are included. FAR 19.702 requires the apparent successful offeror to submit an acceptable Plan. If the apparent successful offeror fails to negotiate a Plan acceptable to the contracting officer within the time limit prescribed by the contracting officer, the offeror will be ineligible for award.

Offerors shall propose a plan that ensures small businesses (inclusive of SDBs, WOSBs, HUBZone, VOSBs and SDVOSBs) will have the maximum practicable opportunity to participate in contract performance consistent with efficient performance.

As a baseline, Offerors shall, to the best extent possible, propose realistic goals to ensure small business participation in accordance with the current or most recent fiscal year subcontracting goals found on the DoD Office of Small Business Program website at: <http://www.acq.osd.mil/osbp/>. If proposed goals are below the statutory requirements, then the offeror shall include in the Plan a viable written explanation as to why small businesses are unable to be utilized and what attempts were taken to ensure that small business were given the opportunity to participate in the effort to the maximum extent practicable.

2) Small Business Participation Statement –

If subcontracting opportunities exist, all prime Offerors shall submit a Small Business Participation Statement regardless of size in accordance with DFARS 215.304 when receiving a contract for more than the simplified acquisition threshold (i.e., \$150,000). All offerors shall provide a statement of the extent of the offeror’s commitment in providing meaningful subcontracting opportunities for small businesses and other concerns subject to socioeconomic considerations through its awards and must agree that small businesses, VOSBs, SDVOSBs, HUBZones, SDBs, and WOSBs concerns will have the maximum practicable opportunity to participate in contract performance consistent with efficient performance.

This assertion will be reviewed to ensure that it supports this policy by providing meaningful subcontracting opportunities. The statement should be submitted as an attachment to the “Proposal Checklist” and will not be included in the page count.

3) Subcontracting Resources -

Subcontracting to a prime contractor can be a good way to participate in the contracting process. The following is a list of potential resources that may assist in locating potential subcontracting partners/opportunities/resources:

- *Companies Participating in DoD Subcontracting Program Report
- *DAU Small Business Community of Practice (SB COP)
- *DefenseLink \geq \$7.0 M Award Notices
- *DoD OSBP Prime Contractors and Subcontractors with Subcontracting Plans
- *Dynamic Small Business Search
- *Electronic Subcontracting Reporting System (eSRS)
- *Federal Business Opportunities (FEDBIZOPPS)
- *Navy SBIR/STTR Search – Website or Brochure
- *DoD Procurement Technical Assistance Centers (PTAC)
- *Small Business Administration (SBA) Subcontracting Opportunities Directory
- *SBA Subnet

For a description and associated websites visit the ONR Office of Small Business webpage at: <http://www.onr.navy.mil/Contracts-Grants/small-business.aspx>.

In accordance with FAR Subpart 5.206, the following entities may transmit a notice to a Government Point of Entry (GPE) to seek competition for subcontracts, to increase participation by qualified small businesses, VOSBs, SDVOSBs, HUBZones, SDBs, and WOSBs, and to meet established subcontracting plan goal as follows:

- (a) A contractor awarded a contract exceeding \$150,000 that is likely to result in the award of any subcontracts;
- (b) A subcontractor or supplier, at any tier, under a contract exceeding \$150,000, that has a subcontracting opportunity exceeding \$15,000.

The notices must describe—

- (a) The business opportunity;
- (b) Any prequalification requirements; and
- (c) Where to obtain technical data needed to respond to the requirement.

An example of a GPE is the SBA SUB-Net which is a place in which prime contractors may post solicitations or sources sought notices for small business. The SUB-Net database provides a listing of subcontracting solicitations and opportunities posted by large prime contractors and other non-federal agencies.

C. Options and Phase II Award

- (a) Phase I and Option.

The Government will evaluate options for award purposes by adding the total cost for all options to the total cost for the basic requirement. Evaluation of options will not obligate the Government to exercise the options during contract performance.

The Government intends to perform a down-select for Phase I Option based on the degree to which Phase I Base results meet key Attributes listed in Section F Table I and Table 2 and the Threshold metrics specified in the classified addendum. In the event funding is not sufficient to

exercise options for all firms meeting threshold metrics, the Government will evaluate each awardee's Phase 1 Base results, and subject to available funding, exercise Option 1 of those firms which best meet or exceed threshold metrics.

(b) Phase II. The Phase II proposal submission will not be awarded under this BAA. Submissions will be reviewed solely to support post-award planning (e.g., funding, period of performance, potential issues) for the Phase II down-select.

The Government anticipates awarding Phase II through non-competitively awarded contract or contract modification to one or more firm(s) awarded Option I based on evaluation of Phase II Proposals.

Phase II proposals shall (1) demonstrate that the offeror met THRESHOLD metrics in Phase I, and (2) provide the offeror's technical and cost proposal for accomplishing the research and meeting OBJECTIVE metrics. Offerors must meet the threshold metrics to be evaluated for the Phase II effort. The Government intends to evaluate the degree to which Phase II proposals demonstrate the capability to meet or exceed the OBJECTIVE thresholds considering available funding.

A CDRL will be incorporated in the contract to provide more detailed proposal requirements.

D. Evaluation Panel -

Technical and cost proposals submitted under this BAA will be protected from unauthorized disclosure in accordance with FAR 3.104-4 and 15.207. The cognizant Program Officer and other Government scientific experts will perform the evaluation of technical proposals. Restrictive notices notwithstanding, one or more support contractors may be utilized as subject-matter-expert technical consultants. However, proposal selection and award decisions are solely the responsibility of Government personnel. Each support contractor's employee having access to technical and cost proposals submitted in response to this BAA will be required to sign a non-disclosure statement prior to receipt of any proposal submissions.

E. General Information Regarding the Review and Selection Process for Grants – RESERVED

VI. AWARD ADMINISTRATION INFORMATION

Administrative Requirements –

A. North American Industry Classification System (NAICS) code – The NAICS code for this announcement is 541712 with a small business size standard of “1,000 employees”.
(Applies to contracts only.)

B. System for Award Management (SAM): All Offerors submitting proposals or applications must:

- 1) be registered in the SAM prior to submission;
- 2) maintain an active SAM registration with current information at all times during which it has an active Federal award or an application under consideration by any agency; and

3) provide its DUNS number in each application or proposal it submits to the agency.

SAM may be accessed at <https://www.sam.gov/portal/public/SAM/>

***All offeror's must possess CONFIDENTIAL facility clearance and CONFIDENTIAL safeguarding and must be registered with the Joint Certification Program.**

C. Access to your Contract Award

Office of Naval Research (ONR) award/modification documents are only available via the Department of Defense (DoD) Electronic Document Access System (EDA) within the WideArea WorkFlow e-Business Suite (<https://wawf.eb.mil/>).

EDA is a Web-based system that provides secure online access, storage and retrieval of awards and modifications to DoD employees and vendors.

ONR creates an award notification profile for every award.

For all other awards, the notification profile will use the email address from the Business Point of Contact to notify the recipient of an award.

IMPORTANT: In some cases, EDA notifications are appearing in recipients' Junk Email folder. If you are experiencing issues receiving EDA notifications, please check your junk email. If found, please mark EDA notifications as "not junk."

If you do not currently have access to EDA, you may complete a self-registration request as a "Vendor" via <https://wawf.eb.mil/> following the steps below:

1. Click "Accept"
2. Click "Register" (top right)
3. Click "Agree"
4. In the "What type of user are you?" drop down, select "Vendor"
5. Select the systems you would like to access (iRAPT at a minimum)
6. Complete the User Profile and follow the site instructions

Allow five business days for your registration to be processed. EDA will notify you by email when your account is approved.

To access awards after your registration has been approved, log into <https://wawf.eb.mil/>, select "EDA", select either EDA location, Select "Contracts", select your search preference, enter the Contract Number and select "View".

Registration questions may be directed to the EDA help desk toll free at 866-618-5988, commercial at 801-605-7095, or via email at disa.ogden.esd.mbx.cscassig@mail.mil

VII. OTHER INFORMATION - RESERVED

Section VII: Table of Contents

A. [Applies to Grant, Cooperative Agreement and Other Transaction Agreement proposals only – RESERVED.](#)

B. Applies to Contracts only:

- i. Government Property/Government Furnished Equipment (GFE) and Facilities
- ii. Use of Arms, Ammunition and Explosives
- iii. System for Award Management (SAM)
- iv. Employment Eligibility Verification (E-verify)
- v. Conflicts of Interest
- vi. FAR / DFARS Clauses
- vii. Combating Trafficking in Person
- viii. Certification Regarding Trafficking in Persons Compliance Plan
- ix. Updates of Information regarding Responsibility Matters

* Click on the above hyperlinks to navigate directly to your desired section

i. Government Property/Government Furnished Equipment (GFE) and Facilities:

Government research facilities and operational military units are available and should be considered as potential government-furnished equipment/facilities. These facilities and resources are of high value and some are in constant demand by multiple programs. It is unlikely that all facilities would be used for any one specific program. The use of these facilities and resources will be negotiated as the program unfolds. Offerors should indicate in the Proposal Checklist, Section II, Blocks 8 and 9, which of these facilities are critical for the project's success.

ii. Use of Arms, Ammunition and Explosives:

Safety

The Offeror is required to be in compliance with DoD manual 4145.26-M, *DoD Contractor's Safety Manual for Ammunition and Explosives* if ammunitions and/or explosives are to be utilized under the proposed research effort. (See DFARS 223.370-5 and DFARS 252.223-7002)

If ammunitions and/or explosives (A&E) are to be utilized under the proposed research effort, the Government requires a preaward safety survey in accordance with DFARS PGI 223.370-4(C)(iv) entitled *Preaward survey*. The Offeror is solely responsible for contacting the cognizant Defense Contract Management Agency (DCMA) office and obtaining a required preaward safety survey before proposal submission. The Offeror should include required preaward safety surveys with proposal submissions.

If the Offeror proposes that the Government provide Government-furnished A&E containing any nitrocellulose-based propellants and/or nitrate ester-based materials

(such as nitroglycerin) or other similar A&E with a tendency to become chemically unstable over time, then NMCARS 5252.223-9000 will also apply to a resulting contract award. (See NMCARS 5223.370-5)

Security

If arms, ammunition or explosives (AA&E) are to be utilized under the proposed research effort, the Government requires a preaward security survey. The Offeror is solely responsible for contacting the cognizant DCMA office and obtaining a required preaward security survey before proposal submission. The Offeror should include a required preaward security survey with proposal submission. (See DoD manual 5100.76-M, *Physical Security of Sensitive Conventional Arms, Ammunition and Explosives*, paragraph C1.3.1.4)

If AA&E are to be utilized under the proposed research effort, the Government may require the Contractor to have perimeter fencing around the place of performance in accordance with DoD 5100.76-M, Appendix 2.

If AA&E are to be utilized under the proposed research effort, the Offeror is required to provide a written copy of the Offeror's AA&E accountability procedures in accordance with DoD 5100.76-M. If the Offeror is required to provide written AA&E accountability procedures, the Offeror should provide the respective procedures with its proposal submission. See DoD 5100.76-M Appendix 2.12.

iii. System for Award Management (SAM):

FAR 52.204-7 System for Award Management and FAR 52.204-13 System for Award Management Maintenance are incorporated into this BAA, and FAR 52.204-13 will be incorporated in all awards.

iv. Employment Eligibility Verification (E-verify):

As per FAR 22.1802, recipients of FAR-based procurement contracts must enroll as Federal Contractors in E-verify and use E-verify to verify employment eligibility of all employees assigned to the award. All resultant contracts from this solicitation will include FAR 52.222-54, "Employment Eligibility Verification."

v. Conflicts of Interest:

(1) Disclosure. An offeror shall state in its proposal whether it is aware of any information bearing on the existence of any actual or potential organizational conflict of interest (OCI) as defined in FAR 2.101 and as further discussed in FAR Subpart 9.5 as to itself and any proposed subcontractors, partners, consultants or other affiliates. Offerors performing systems engineering and technical assistance (SETA) for ONR are considered to have an OCI that may not be susceptible to mitigation. See ONR's Statement of Policy on OCIs, which can be found at the following address: <http://www.onr.navy.mil/en/About-ONR/compliance-protections/Organizational-Conflicts-Interest.aspx>

The nondisclosure or misrepresentation of an interest creating an OCI may result in the disqualification of an offeror for award, or if such nondisclosure or misrepresentation is discovered after award, the Government may terminate the contract for default, recommend that the contractor be disqualified from subsequent related contracts, or be subject to such other remedial actions as may be permitted or provided by law (see 18 U.S.C. § 1001 and 31 U.S.C. § 3802(a)(2)). Therefore, offerors should interpret the requirements of this section broadly.

An offeror who does not provide support services to ONR or concludes no actual or potential OCI exists shall include the following statement in its proposal: “I [NAME] as an authorized negotiator on behalf of [NAME OF OFFEROR] certify that **NO** actual or potential organizational conflict of interest (OCI) exists under [BAA NUMBER]. I understand that the failure to disclose the existence of actual or potential OCI shall result in the offeror not being considered for award.”

An offeror who does provide support services to ONR or is aware circumstances exist that may result in the appearance that it may have an unfair competitive advantage shall submit the following with its proposal:

(a) The name of the entity the offeror, its subcontractors, partners, consultants or affiliates supports.

(b) The number of the contract, subcontract, or agreement that creates the actual or potential OCI. If ONR did not award the contract or agreement, provide a copy of the document. If ONR awarded the contract, provide the name of the technical point of contact.

(c) A description of the actual or potential OCI. The statement must describe in a concise manner all relevant facts concerning any past, present or currently planned interest (financial, contractual, organizational, or otherwise) relating to the work to be performed hereunder and bearing on whether the offeror has a possible organizational conflict of interest with respect to (1) impartial, technically sound, and unbiased assessments, recommendations, or evaluations, or (2) being given an unfair competitive advantage. If relevant, offerors shall address the personal conflicts of their employees.

(d) A Mitigation Plan. Offerors should refer to FAR Subpart 9.5 for policies and procedures for avoiding, neutralizing, or mitigating organizational conflicts of interest.

(e) A concluding statement as follows: “I [NAME] as an authorized negotiator on behalf of [NAME OF OFFEROR] certify that I have, to the best of my knowledge and belief, disclosed all actual or potential organizational conflicts of interest (OCI) under [BAA NUMBER]. I understand that the failure to disclose the existence of an actual or potential OCI shall result in the offeror not being considered for award.”

(2) OCI Mitigation Plan Contents. At a minimum, a Mitigation Plan shall:

(a) Provide organizational charts showing the offeror’s (and, as appropriate, those of its subcontractors, partners, consultants, and affiliates) structure as it relates to performance under the contract awarded under this BAA and all contracts and

agreements relevant to the OCI, highlighting those elements that create the actual or apparent OCI.

(b) Demonstrate how the elements that create the actual or apparent OCI will be isolated from the resources that will perform work under the contract awarded under this BAA.

(c) Provide information showing whether the organizational elements that will perform work under the contract awarded under this BAA will be geographically or physically separated from the elements that create the actual or apparent OCI.

(d) For each contract or agreement relevant to the OCI, describe the process for reassigning personnel, including those belonging to subcontractors, partners, consultants, and affiliates, from one organization to another. Include restrictions that apply.

(e) For each contract or agreement relevant to the OCI, describe the any controls, including nondisclosure agreements, that are exercised over the future employment of departing employees as it relates to the OCI.

(f) For each contract or agreement relevant to the OCI, describe any OCI training the employees are offered or required to attend, along with the timing (before or after starting work on a government contract), frequency, length, and content of such training.

(g) Provide evidence of facts and circumstances that the offeror asserts mitigate or address the concerns related to the actual or potential OCI.

(3) Review. The Contracting Officer will review an offeror's certifications, statements, and OCI Mitigation Plan (if applicable) submitted and may require additional relevant information from an offeror. All such information and any other relevant information will be used by the Contracting Officer to determine whether an award to the offeror may create an OCI. If found to exist, the Government may: (1) impose appropriate conditions which avoid such conflict, (2) disqualify the offeror, (3) determine that it is otherwise in the best interest of the Government to award a contract to the offeror and include appropriate conditions mitigating such conflict in the award, or (4) seek a waiver. If the Contracting Officer determines that an actual or significant potential conflict of interest exists that cannot reasonably be avoided, neutralized or mitigated, the offeror will be ineligible for award. If accepted, the Mitigation Plan shall become part of the contract.

An offeror who has refused to disclose the information or make the certification required by this BAA concerning an actual or potential OCI shall be disqualified from consideration for award.

vi. FAR / DFARS Provisions:

For purposes of illustration and not of limitation, the following provisions may be

applicable to ONR contracts:

#	Provision
52.204-2	Security Requirements
52.204-7	System for Award Management
52.215-16	Facilities Capital Cost of Money
52.215-22	Limitations on Pass Through Charges - Identification of Subcontract Effort
52.216-1	Type of Contract
52.216-27	Single or Multiple Awards
52.217-4	Evaluation of Options Exercised at time of Contract Award
52.217-5	Evaluation of Options
52.222-24	Preaward On-Site Equal Opportunity Compliance Evaluation (Applies if exceeds \$10M)
52.226-2	Historically Black College or University and Minority Institution Representation
52.230-7	Proposal Disclosure - Cost Accounting Practice Changes
52.232-15	Progress Payments not included
52.233-2	Service of Protest
52.252-1	Solicitation Provisions Incorporated by Reference
52.252-3	Alterations in Solicitation
52.252-5	Authorized Deviations in Provisions
252.203-7005	Representation Relating to Compensation of Former DoD Officials
252.204-7004	Alternate A, System for Award Management
252.204-7008	Compliance with Safeguarding Covered Defense Information Controls (DEC 2015)
252.204-7012	Safeguarding Covered Defense Information and Cyber Incident Reporting (DEC 2015)
252.215-7003	Requirements for Submission of Data Other than Certified Cost or Pricing Data - Canadian Commercial Corporation
252.219-7000	Advancing Small Business Growth

vii. Combating Trafficking in Persons:

Appropriate language from FAR Clause 52.222-50 will be incorporated in all awards.

viii. Certification Regarding Trafficking in Persons Compliance Plan:

Prior to award of a contract, for the portion of the contract that is for supplies, other than commercially available off-the-shelf items, to be acquired outside the United States, or services to be performed outside the United States, and which has an estimated value that exceeds \$500,000, the contractor shall submit the certificate as specified in paragraph (c) of 52.222-56, Certification Regarding Trafficking in Persons Compliance Plan

- ix. Updates of Information regarding Responsibility Matters:

FAR clause 52.209-9, Updates of Publicly Available Information Regarding Responsibility Matter, will be included in all contracts valued at \$500,000 where the contractor has current active Federal contracts and grants with total value greater than \$10,000,000.

C. Applies to Contracts, Grants, Cooperative Agreements and Other Transaction Agreements:

- i. Security Classification
- ii. Requirements Concerning Live Organisms
- iii. Institutional Dual Use Research of Concern
- iv. Department of Defense High Performance Computing Program
- v. Project Meetings and Reviews

* Click on the above hyperlinks to navigate directly to your desired section

- i. Security Classification:

In order to facilitate intra-program collaboration and technology transfer, the Government will attempt to enable technology developers to work at the unclassified level to the maximum extent possible. If access to classified material will be required at any point during performance, the Offeror must clearly identify such need in Section II, Block 11 of the Proposal Checklist.

If it is determined that access to classified information will be required during the performance of an award, a Department of Defense (DD) Form 254 will be attached to the contract, and FAR 52.204-2 - Security Requirements will be incorporated into the contract.

ONR does not provide access to classified material under grants.

- ii. Requirements Concerning Live Organisms:

- (1) Use of Animals:

If animals are to be utilized in the research effort proposed, the Offeror must submit a Full Appendix or Abbreviated Appendix with supporting documentation (copies of IACUC Approval, IACUC Approved Protocol, and most recent USDA Inspection Report) prior to award. For assistance with submission of animal research related documentation, contact the ONR Animal Use Administrator at (703) 696-4046.

Guidance: <http://www.onr.navy.mil/en/About-ONR/compliance-protections/Research-Protections/Animal-Recombinant-DNA.aspx>

- (2) Use of Human Subjects in Research:

(a) You must protect the rights and welfare of individuals who participate as human subjects in research under this award and comply with the requirements of the Common Rule at 32 CFR part 219 and applicable provisions of DoD Instruction 3216.02, Protection of Human Subjects and Adherence to Ethical Standards in DoD-

Supported Research (2011), the DON implementation of the human research protection program contained in SECNAVINST 3900.39D (or its replacement), 10 USC 980 “Limitation on Use of Humans as Experimental Subjects,” and when applicable, Food and Drug Administration (FDA) and other federal and state law and regulations.

(b) For proposals containing activities that include or may include “research involving human subjects” as defined in DoDI 3216.02, prior to award, the Offeror must submit documentation of:

(i) Approval from an Institutional Review Board (IRB) (IRB-approved research protocol, IRB- approved informed consent document, and other material they considered); proof of completed human research training (e.g., training certificate or institutional verification of training for the principal investigator, co-investigators); and the Offeror’s Department of Health and Human Services (DHHS)-issued Federalwide Assurance (FWA#),

(ii) Any claimed exemption under 32 CFR 219 101(b), including the category of exemption, supporting documentation considered by your institution in making the determination (e.g., protocol, data collection tools, advertisements, etc.). The documentation shall include a short rationale supporting the exemption determination. This documentation should be signed by the IRB Chair or IRB vice Chair, designated IRB administrator or official of the human research protection program.

(iii) Any determinations that the proposal does not contain activities that constitute research involving human subjects, including supporting documentation considered by your institution in making the determination. This documentation should be issued by the IRB Chair or IRB vice Chair, designated IRB administrator or official of the human research protection program.

(c) Documentation must be submitted to the ONR Human Research Protection Official (HRPO), by way of the ONR Program Officer. If the research is determined by the IRB to be greater than minimal risk, you also must provide the name and contact information for the independent research monitor and a written summary of the monitors’ duties, authorities, and responsibilities as approved by the IRB. For assistance with submission of human subject research related documentation, contact the ONR Human Research Protection Official (HRPO) at (703) 696-4046.

(d) Contracts, orders, or grant awards and any subawards or modifications will include a statement indicating successful completion of the HRPO review. Research involving human subjects must not be commenced under any contract award or modification or any subcontract or grant subaward or modification until awardee receives notification from the Contracting or Grants Officer that the HRPO has approved the assurance as appropriate for the research under the award or modification and that the HRPO has reviewed the protocol and accepted the IRB

approval or determination for compliance with Federal, DoD and DON research protection requirements. See, DFARS 252.235-7004. Guidance: <http://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/Human-Subject-Research.aspx>

(3) Use of Recombinant DNA or Synthetic Nucleic Acid Molecules:

Proposals which call for experiments using recombinant or synthetic nucleic acid molecules must include documentation of compliance with NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules (NIH Guidelines), approval of the Institutional Biosafety Committee (IBC), and copies of the DHHS Approval of the IBC letter. Guidance: <http://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/Animal-Recombinant-DNA.aspx>

iii. Institutional Dual Use Research of Concern:

As of September 24, 2015, all institutions and United States Government (USG) funding agencies subject to the [United States Government Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern](#) must comply with all the requirements listed therein. If your research proposal directly involves certain biological agents or toxins, contact the cognizant Technical Point of Contact. U.S. Government Science, Safety, Security (S3) guidance may be found at <http://www.phe.gov/s3/dualuse>.

iv. Department of Defense High Performance Computing Program:

The DoD High Performance Computing Program (HPCMP) furnishes the DoD S&T and RDT&E communities with use-access to very powerful high performance computing systems. Awardees of ONR contracts, grants, and other assistance instruments may be eligible to use HPCMP assets in support of their funded activities if ONR Program Officer approval is obtained and if security/screening requirements are favorably completed. Additional information and an application may be found at <http://www.hpcmo.hpc.mil/>.

v. Project Meetings and Reviews:

Individual program reviews between the ONR sponsor and the performer may be held as necessary. Program status reviews may also be held to provide a forum for reviews of the latest results from experiments and any other incremental progress towards the major demonstrations. These meetings will be held at various sites throughout the country. For costing purposes, offerors should assume that 40% of these meetings will be at or near ONR, Arlington VA and 60% at other contractor or government facilities. (This statement does not apply to international offerors submitting proposals to ONRG. International offerors should contact the cognizant ONRG Administrative Director (AD) for guidance prior to submitting a proposal.) Interim meetings are likely, but these will be accomplished via video telephone conferences, telephone conferences, or via web-based collaboration tools.

APENDIX A: Definition of Technology Readiness Levels

TRL 1 Basic principles observed and reported: Transition from scientific research to applied research. Essential characteristics and behaviors of systems and architectures. Descriptive tools are mathematical formulations or algorithms.

TRL 2 Technology concept and/or application formulated: Applied research. Theory and scientific principles are focused on specific application area to define the concept. Characteristics of the application are described. Analytical tools are developed for simulation or analysis of the application.

TRL 3 Analytical and experimental critical function and/or characteristic proof-of-concept: Proof of concept validation. Active Research and Development (R&D) is initiated with analytical and laboratory studies. Demonstration of technical feasibility using breadboard or brassboard implementations that are exercised with representative data.

TRL 4 Component/subsystem validation in laboratory environment: Standalone prototyping implementation and test. Integration of technology elements. Experiments with full-scale problems or data sets.

TRL 5 System/subsystem/component validation in relevant environment: Thorough testing of prototyping in representative environment. Basic technology elements integrated with reasonably realistic supporting elements. Prototyping implementations conform to target environment and interfaces.

TRL 6 System/subsystem model or prototyping demonstration in a relevant end-to-end environment (ground or space): Prototyping implementations on full-scale realistic problems. Partially integrated with existing systems. Limited documentation available. Engineering feasibility fully demonstrated in actual system application.

TRL 7 System prototyping demonstration in an operational environment (ground or space): System prototyping demonstration in operational environment. System is at or near scale of the operational system, with most functions available for demonstration and test. Well integrated with collateral and ancillary systems. Limited documentation available.

TRL 8 Actual system completed and "mission qualified" through test and demonstration in an operational environment (ground or space): End of system development. Fully integrated with operational hardware and software systems. Most user documentation, training documentation, and maintenance documentation completed. All functionality tested in simulated and operational scenarios. Verification and Validation (V&V) completed.

TRL 9 Actual system "mission proven" through successful mission operations (ground or space): Fully integrated with operational hardware/software systems. Actual system has been thoroughly demonstrated and tested in its operational environment. All documentation completed. Successful operational experience. Sustaining engineering support in place.