



## New Concepts in Energy Conversion and Power Management

### **INTRODUCTION:**

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in the Department of Defense Grants and Agreements Regulations (DoDGARS) 22.315(a). A formal Request for Proposals (RFP), other solicitation, 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 as sensitive competitive information and to disclose their contents only for the purposes of evaluation.

### **I GENERAL INFORMATION:**

**SPECIAL NOTICE:** All Grant Applications submitted under this BAA shall be submitted via the Grants.Gov "APPLY" function. No other form of paper or electronic submission will be accepted unless the prospective grantee organization applies for and receives a waiver in accordance with Section IV, Application and Submission Information, Paragraph 5 entitled 'Submission of Grant Proposals to Grants.gov' below. White Papers are not submitted via Grants.gov; instructions for White Papers are provided below in Section IV.

All attachments to grant applications submitted through Grants.Gov must be in Adobe Portable Document Format. Proposals with attachments submitted in word processing, spreadsheet, or any format other than Adobe Portable Document Format will not be considered for award.

Be advised that Grants.gov applicants have been experiencing system slowness and validation issues which may impact the time required to submit proposals. Due to a large increase in the volume of grant proposals received by the federal government, the Grants.gov portal is struggling to handle the number of proposals being submitted. In addition, after proposals are uploaded to Grants.gov, the applicant receives an e-mail indicating the proposal has been submitted and that Grants.gov will take up to two days to validate the proposal. Grants.gov may reject the proposal during the validation process. Therefore, applicants are strongly encouraged to submit their proposals electronically at least **THREE** days before the date and time proposals are due so that it will not be received late and be ineligible for award consideration. Early submission will allow an applicant time to submit its proposal to ONR through an alternative electronic method in the event the proposal is not accepted by Grants.gov. See the special notice on alternate submission under section IV.5 below in this BAA.

- 1. Agency Name** - Office of Naval Research
- 2. Research Opportunity Title** - New Concepts in Energy Conversion and Power Management
- 3. Program Name** - Energy and Power Management

#### 4. Research Opportunity Number - 09-038

#### 5. Response Date -

White Papers: 10/1/2009  
Full Proposals: 11/6/2009

#### 6. Research Opportunity Description -

The Office of Naval Research, Sea Warfare and Weapons Department (Code 33), Ship Systems and Engineering Division (Code 331) is interested in receiving proposals for basic research initiatives addressing long-range needs for Navy and Marine Corps operations. Scientific study and experimentation directed toward increasing fundamental knowledge and understanding in the field of energy conversion and power management is sought. Farsighted, high-payoff research providing the basis for technological progress in power conversion and power management is of interest, and identifying / characterizing fundamental technology barriers is a key objective. The Naval S&T Strategic Plan and Next Generation Integrated Power System (NGIPS) Technology Development Roadmap are both good sources of information outlining the scope of future Navy interests relative to power and energy.

EXCLUSIONS: RESEARCH TOPICS RELATING TO SHIP MAIN ENGINES, NUCLEAR POWER, VEHICLE POWER, PHOTOVOLTAICS, THERMAL MANAGEMENT, BATTERY / CAPACITOR / FUEL CELL ELECTROCHEMICAL CONVERSION, OR THERMOELECTRIC CONVERSION ARE NOT OF INTEREST UNDER THIS BAA.

Topic areas of interest are as follows:

Topic 1 - Electric ship vision: Fundamental research subtopics include, but are not limited to:

- Distribution/Control: Formulation of novel, transient and steady-state, power & energy control concepts for zonal medium voltage (6kV) DC distribution onboard combatant craft; Imbedded intelligence and Cyber-Physical Energy System conceptual research;
- Models: Physics-based models and representations of performance and fault phenomena not fully understood in medium voltage DC architectures; and
- Semiconductor / Electromagnetics / Passives: Understanding performance and losses in solid-state devices such as high power switches, diodes, inductors, breakers, fault-current limiters/reducers, and switchgear; Novel conductor and dielectric materials for wiring, insulation, and sliding electrical contacts; Identifying alternative soft/hard magnetic materials and soft magnetic composite materials toward enabling improvements in torque density, efficiency, and cost in electromagnetic conversion; and Next-generation superconducting materials and devices.

Topic 2 - Fuel efficiency: Fundamental research subtopics include, but are not limited to:

- Power management: New concepts for non solid-state conversion devices to reduce losses across broad loading scenarios; Concepts eliminating inefficiencies due to the practice of utilizing spinning reserves; New means of converting fuel energy to electric power on-demand through hybrid and non-standard approaches;
- Models: A fundamental, comprehensive understanding of the physics involved in automated control of power flow, power quality, stability, demand, and distributed/centralized storage to enable more informed power management concepts for the future; and
- Demand management: New automated concepts in managing real-time individual and aggregate power demand, and alternative means to promote and achieve energy conservation.

Topic 3 - Future conversion concepts: Fundamental research subtopics include, but are not limited to:

- Alternative energy conversion: Non-nuclear plasma / plasmon energy conversion research;

Pyroelectric energy conversion (Olsen cycle, etc.); Thermodynamic exergy / anergy research; and Non-solar photoelectric conversion concepts;

- Biomimetics: Fundamentals of bioinspired power, energy, and propulsion concepts;
- Quantum mechanics: Nanoscale approaches to improve classical engines and energy conversion (discrete energy levels, quantum confinement/coherence/electrodynamics, and particle exchange-based heat engines, reversible and irreversible Brownian heat engines, non-classical analysis/modeling); and
- Material synthesis: Fundamental research toward enabling real-time, dynamic material property & performance manipulation/control; and Material surface science as related to power and energy.

Work funded under a BAA may include basic research, applied research and some advanced technology development (ATD). 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 26 June 2008. As defined therein, the definition of "contracted fundamental research", in a DoD contractual context, includes grants and contracts that are (a) funded by Research, Development, Test, and Evaluation Budget Activity 1 (Basic Research), whether performed by universities or industry or (b) funded by Budget Activity 2 (Applied Research) and performed on campus at a university or by industry. ATD is funded through Budget Activity 3. 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 fundamental research, except as otherwise required by statute, regulation or Executive Order. Normally, fundamental research is awarded under grants with universities and under contracts with industry. ATD is normally awarded under contracts and may require restrictions during the conduct of the research and DoD pre-publication review of research results due to subject matter sensitivity. In regards to the present BAA, only Basic Research topics are of interest. Only Budget Activity 1 funds are available to support awards under this announcement.

## 7. Point(s) of Contact -

Questions of a technical nature should be submitted to:

Program Officer: H. Scott Coombe, Ph.D, P.E.  
 Address: 875 N. Randolph St., Arlington, VA 22203  
 Code: 331  
 Email: harold.coombe@navy.mil

Questions of a business nature should be submitted to:

Name: Ms. Lynnette Desorcie  
 Address: 875 N. Randolph St., Arlington, VA 22203  
 Code: 254  
 Email: lynnette.desorcie@navy.mil

Any questions regarding this solicitation must be provided to the Technical Point of Contact and Business Point of Contact listed in this solicitation. All questions shall be submitted in writing by electronic mail.

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

Answers to questions submitted in response to this BAA will be addressed in the form of an Amendment and will be posted to one or more of the following webpages:

- Federal Business Opportunities (FEDBIZOPPS) Webpage - <https://www.fbo.gov/>

- Grants.gov Webpage - <http://www.grants.gov/>
- ONR Broad Agency Announcement (BAA) Webpage - <http://www.onr.navy.mil/02/baa/>

## **8. Instrument Type(s) - Grants**

Awards may take the form of Grants as appropriate. ONR reserves the right to award a different instrument type if deemed to be in the best interest of the Government.

## **9. Catalog of Federal Domestic Assistance (CFDA) Numbers -**

12.300

## **10. Catalog of Federal Domestic Assistance (CFDA) Titles -**

Basic Scientific Research

## **11. Other Information -**

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. Awards made under BAAs are for scientific study and experimentation directed towards advancing the state of the art and increasing knowledge or understanding.

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

## **II. AWARD INFORMATION**

The amount and period of performance of each selected proposal may vary depending on the research area and the technical approach to be pursued by the selected offeror.

We anticipate approximately \$2M per year available to support this program.

Anticipated Number of Awards: One or more awards per Topic, as described in the Research Opportunity Description. An Offeror may propose on more than one Topic.

Anticipated Range of Individual Award Amounts: As required to complete each Topic. There may be more than one performer per Topic.

Anticipated Period of Performance: Three (3) to five (5) year grants are envisioned.

\*In recent years Congress has placed limits on the percentage of facilities and administrative (F&A) costs that can be paid by the government using basic research (6.1) funds. Currently F&A costs paid under contracts and grants for the performance of basic research may not exceed 35 percent. It is unknown at present whether a similar indirect cost restriction will apply to 6.1 funds in FY 2010 or thereafter.

The award(s) will be made for the full performance period requested. Options will not be utilized.

## **III. ELIGIBILITY INFORMATION**

All responsible sources from academia and industry may submit proposals under this BAA, including those academic institutions that have had little or no previous experience with Navy power conversion research. 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 HBCU and MI participation.

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 bidders are allowed so long as they are permitted under the sponsoring agreement between the Government and the specific FFRDC.

Navy laboratories 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 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 responsible sources from academia and industry that are submitting proposals under this BAA.

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.

Some topics cover export controlled technologies. Research in these areas is limited to "U.S. persons" as defined in the International Traffic in Arms Regulations (ITAR) - 22 CFR § 1201.1 et seq. (See Section VII, Other Information)

#### **IV. APPLICATION AND SUBMISSION INFORMATION**

##### **1. Application and Submission Process - White Paper, Full Proposals**

White Papers are required prior to submitting a Full Proposal. White Papers shall be submitted by email to the Technical Point of Contact (TPOC) identified in Paragraph 7 above (see Section I, GENERAL INFORMATION) by the date and time indicated later in this BAA. Each White Paper will be evaluated by the government to determine whether the research proposed appears to be of "particular value" to the Department of the Navy. The submitters of White Papers judged to be of "particular value" to the Navy will be so identified in the initial response, via email, provided by ONR and encouraged to submit a Full Proposal. The submitter of any White Paper not judged by ONR reviewers as being of "particular value" to the Navy may still submit a Full Proposal by the date and time specified in the BAA, but the initial Navy response provided is a useful indicator of likely future project funding under this solicitation. Full Proposals will not be considered under this BAA unless a White Paper was received before the White Paper due date specified above.

Full proposals will be submitted via the Grants.gov web site as indicated later in this solicitation.

##### **2. Content and Format of White Papers/Full Proposals -**

White Papers and Full Proposals submitted under the BAA are expected to be unclassified .

##### Unclassified Proposal Instructions:

Unclassified White Papers and Full Proposals shall be submitted in accordance with Section IV. Application and Submission Information.

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. The full proposal shall include a severable, self-standing Statement of Work, which contains only unclassified information and does not include any proprietary restrictions.

**IMPORTANT NOTE:** Titles given to the White Papers/Full Proposals should be descriptive of the

work they cover and not be merely a copy of the title of this solicitation.

The proposal format and content identified below are applicable to the submission of proposals for contracts. As noted in Paragraph 5 below, proposals selecting grant awards are to be formatted as required by Standard Form 424 (R&R), which is available via the internet at <http://www.grants.gov/>.

## **WHITE PAPERS**

### **White Paper Format**

- Paper Size - 8.5 x 11 inch paper
- Margins - 1 inch
- Spacing - single spaced
- Font - Times New Roman, 12 point
- Max. Number of Pages permitted: 5 pages (excluding cover page, resumes, bibliographies, and table of contents)
- Format - One (1) electronic copy in Adobe PDF delivered via email.

### **White Paper Content**

- **Cover Page:** The Cover Page shall be labeled "WHITE PAPER" and shall include the BAA number, proposed title, technical points of contact, telephone number, facsimile number, and e-mail address.
- **Technical Concept:** A description of the technology innovation and technical risk areas.

The technical section must address the following:

1. Status Quo - describe the "State-of-Practice", "State-of-the-Art", and applicable literature in the research area of interest.
2. New Insights - identify the findings or thought processes that led to the formulation of proposed research topic.
3. Projected achievements - assuming the research is successful, describe the intended outcome (new understanding, new material, etc.)
4. Assumptions & Limitations - identify baseline assumed for research effort
5. Quantitative impact - discuss important metrics of interest as appropriate and describe how the research will improve upon the current state-of-the-art in the proposed research area.
6. End of project goals - describe the likely long-term impact of the research. Also, specify the planned output/deliverables from the research effort (publications, experimental results, analytical results, computational results, etc.)
7. Confidentiality - identify proprietary aspects of the research and any assertions of data rights applicable to the results of this effort.
8. Proposed duration of research program, and estimated cost per year.

- **Future Naval Relevance:** A description of potential Naval relevance and contributions of the effort to the agency's specific mission.

## **FULL PROPOSALS**

### **Full Proposal Format - Volume 1 - Technical and Volume 2 - Cost Proposal**

- Paper Size - 8.5 x 11 inch paper
- Margins - 1 inch
- Spacing - single-spaced
- Font - Times New Roman, 12 point
- Number of Pages - The Technical Volume (Vol. 1) shall not exceed more than 20 pages. The cover page, table of contents, personnel resumes, and bibliographies shall not be

included in the page limit. Full Proposals exceeding the page limit may not be evaluated. There are no page limitations to the Cost Proposal, Volume 2.

- Format - If a grant is sought, the full proposal shall be submitted electronically on Standard Form 424 (R&R) at <http://www.grants.gov/> as delineated below.

## **Full Proposal Content**

### **Volume 1: Technical Proposal**

- **Cover Page:** This should include the words "Technical Proposal" and the following:
  1. BAA number;
  2. Title of Proposal;
  3. Identity of prime Offeror and complete list of subcontractors, if applicable;
  4. Technical contact (name, address, phone/fax, electronic mail address)
  5. Administrative/business contact (name, address, phone/fax, electronic mail address) and;
  6. Duration of effort
- **Table of Contents:** An alphabetical/numerical listing of the sections within the proposal, including corresponding page numbers.
- **Statement of Work:** A Statement of Work (SOW) clearly detailing the scope and objectives of the effort and the technical approach. It is anticipated that the proposed SOW will be incorporated as an attachment to the resultant award instrument. To this end, the proposals must include a severable, self-standing SOW, without any proprietary restrictions, which can be attached to the contract or agreement award. Include a detailed listing of the technical tasks/subtasks organized by year.

Submission of the SOW without restrictive markings is your company's affirmation that the SOW is non-proprietary and releasable in response to Freedom of Information Act (FOIA) requests.

- **Technical Approach and Justification:** The major portion of the proposal should consist of a clear description of the technical approach being proposed. This discussion should provide the technical foundation / justification for pursuing this particular approach / direction and why one could expect it to enable the objectives of the proposal to be met.
  - **Future Naval Relevance:** A description of potential Naval relevance and contributions of the effort to the agency's specific mission.
- **Project Schedule and Milestones:** A summary of the schedule of events and milestones.
- **Assertion of Data Rights and/or Rights in Computer Software:** For a contract award an Offeror may provide with its proposal assertions to restrict use, release or disclosure of data and/or computer software that will be provided in the course of contract performance. The rules governing these assertions are prescribed in Defense Federal Acquisition Regulation Supplement (DFARS) clauses 252.227-7013, -7014 and - 7017. These clauses may be accessed at the following web address:

<http://farsite.hill.af.mil/VDFDARA.HTM>

The Government may challenge assertions that are provided in improper format or that do not properly acknowledge earlier federal funding of related research by the Offeror.

Grants do not include assertion of data rights. If it is determined that data rights are not

applicable, indicate no assertions are being made in the proposal submission.

- **Current and Pending Project and Proposal Submissions:** Offerors are required to provide information on all current and pending support for ongoing projects and proposals, including subsequent funding in the case of continuing contracts, grants, and other assistance agreements. Offerors shall provide the following information of any related proposal submissions from whatever sources (e.g., ONR, Federal, State, local or foreign government agencies, public or private foundations, industrial or other commercial organizations).

The information must be provided for all proposals already submitted or submitted concurrently to other possible sponsors, including ONR. Concurrent submission of a proposal to other organizations will not prejudice its review by ONR:

- 1) Title of Proposal and Summary;
- 2) Source and amount of funding (annual direct costs; provide contract and/or grant numbers for current contracts/grants);
- 3) Percentage effort devoted to each project;
- 4) Identity of prime Offeror and complete list of subcontractors, if applicable;
- 5) Technical contact (name, address, phone/fax, electronic mail address)
- 6) Administrative/business contact (name, address, phone/fax, electronic mail address);
- 7) Duration of effort (differentiate basic effort);
- 8) The proposed project and all other projects or activities requiring a portion of time of the Principal Investigator and other senior personnel must be included, even if they receive no salary support from the project(s);
- 9) The total award amount for the entire award period covered (including indirect costs) must be shown as well as the number of person-months or labor hours per year to be devoted to the project, regardless of source of support; and
- 10) State how projects are related to the proposed effort and indicate degree of overlap.

- **Qualifications:** A discussion of the qualifications of the proposed Principal Investigator and any other key personnel. Include resumes for the Principal Investigator and other key personnel and full curricula vitae for Principal Investigators and consultants. The resumes and curricula vitae shall be attached to the proposal and will not count toward the page limitations.

- **Other Requirements:** The full proposal, volume I, Technical Approach and Justification section shall include an expanded discussion of the following topics as originally addressed in the white paper:

1. Status Quo - describe the "State-of-Practice", "State-of-the-Art", and applicable literature in the research area of interest.
2. New Insights - identify the findings or thought processes that led to the formulation of proposed research topic.
3. Projected achievements - assuming the research is successful, describe the intended outcome (new understanding, new material, etc.)
4. Assumptions & Limitations - identify baseline assumed for research effort
5. Quantitative impact - discuss important metrics of interest as appropriate and describe how the research will improve upon the current state-of-the-art in the proposed research area.
6. End of project goals - describe the likely long-term impact of the research. Also, specify the planned output/deliverables from the research effort (publications, experimental results, analytical results, computational results, etc.)
7. Confidentiality - identify proprietary aspects of the research and any assertions of data rights applicable to the results of this effort.
8. Proposed duration of research program, and estimated cost per year.

## **VOLUME 2: Cost Proposal**

## INSTRUCTIONS FOR GRANTS

The offeror must use the Grants.Gov forms from the application package template associated with the BAA on the Grants.Gov web site located at <http://www.grants.gov/> . Elements of the budget should include:

- Direct Labor - Individual labor categories or persons, with associated labor hours and unburdened direct labor rates or percentage of effort or total man-years. Provide escalation rates for out years. Justify in Field K of SF424 Research & Related Form (Budget)
- Indirect Costs - Fringe Benefits, Overhead, F&A, G&A etc. and their applicable allocation bases. If composite rates are used, provide the calculations used in deriving the composite rates. Justify in Field K of SF424 Research & Related Form (Budget)
- Travel - The proposed travel cost should include the following for each trip: the purpose of the trip, origin and destination if known, approximate duration, the number of travelers, and the estimated cost per trip must be justified based on the organizations historical average cost per trip or other reasonable basis for estimation. Such estimates and the resultant costs claimed must conform to the applicable Federal cost principles.
- Subawards - Cost proposal as detailed as the recipient's cost proposal will be required to be submitted by the subrecipient. The subawardee's or sub recipient's cost proposal can be provided in a sealed envelope with the recipient's cost proposal or may be sent directly to the Government. Subawardee's proposals must be received and reviewed prior to award. Fee/Profit is unallowable.
- Consultants - Provide a breakdown of the consultant's hours, the hourly rate proposed, any other proposed consultant costs and a copy of the consultant's proposed statement of work if it is not already separately identified in the prime recipient's proposal. Strong justification must be provided, and consultants are to be used only under exceptional circumstances where no equivalent expertise can be found at a participating university or research institution. Justify in Field K of SF424 Research & Related Form (Budget).
- Materials & Supplies - Provide an itemized list of all proposed materials and supplies including quantities, unit prices, proposed vendors (if known), and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists). Justify in Field K of SF424 Research & Related Form (Budget).
- Recipient Acquired Equipment or Facilities - Equipment and/or facilities are normally furnished by the Recipient. If acquisition of equipment and/or facilities is proposed, a justification for the purchase of the items must be provided. Provide an itemized list of all equipment and/or facilities costs and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists). For computer/laptop purchases include a statement that indicates whether the computer/laptop will be integrated into the program or used as an integral part of the research effort. Justify in Field K of SF424 Research & Related Form (Budget).
- Other Direct Costs - Provide an itemized list of all other proposed other direct costs such as Graduate Assistant tuition, laboratory fees, report and publication costs, and the basis for the estimates (e.g., quotes, prior purchases, catalog price lists). Justify in Field K of SF424 Research & Related Form (Budget).  
NOTE: If the grant proposal is for a conference, workshop, or symposium, the proposal should include the following statement: "The funds provided by ONR will not be used for food or beverages."
- Fee/Profit - Fee/profit is unallowable.

### 3. Significant Dates and Times -

Event	Date	Time
White Paper Due Date	10/1/2009	4:00 PM Eastern Daylight Time
Notification of White Paper Evaluation*	10/16/2009	

Full Proposal Due Date	11/6/2009	4:00 PM Eastern Standard Time
Notification of Selection: Full Proposals*	11/23/2009	
Awards*	1/8/2010	

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

#### **4. 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:

- 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
- 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
- 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.

#### **5. Submission of Grant Proposals through Grants.gov**

Detailed instructions entitled "Grants.Gov Electronic Application and Submission Information" on how to submit a grant proposal through Grants.gov may be found at the ONR website listed under the 'Acquisition Department - Contracts & Grants Submitting a Proposal' link at: [http://www.onr.navy.mil/02/how\\_to.asp](http://www.onr.navy.mil/02/how_to.asp)

Grant proposals shall be submitted through Grants.Gov using the Grants.gov forms from the application package template associated with the BAA on the Grants.Gov website. To be considered for award, applicants must include the ONR Department Code in Block 4 entitled 'Federal Identifier' of the Standard Form (SF) 424 R&R.

White Papers should not be submitted through the Grants.gov Apply process but rather should be sent directly to ONR. White Papers should be submitted in accordance with Section IV. APPLICATION AND SUBMISSION INFORMATION.

By completing Blocks 18 and 19 the Grant Applicant is providing the certification on lobbying required by 32 CFR Part 28. Refer to Section VI, 'Award Administration Information' entitled "Certifications" for further information.

For electronic submission of grant full proposals, several one-time actions must be completed in order to submit an application through Grants.gov. These include obtaining a Dun and Bradstreet Data Universal Numbering System (DUNS) number, registering with the Central Contract Registration (CCR), registering with the credential provider, and registering with Grants.gov. See [www.grants.gov](http://www.grants.gov), specifically [www.grants.gov/GetStarted](http://www.grants.gov/GetStarted).

Use the Grants.gov Organization Registration Checklist at [http://www.grants.gov/applicants/register\\_your\\_organization.jsp](http://www.grants.gov/applicants/register_your_organization.jsp) which will provide guidance through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called 'MPIN' are important steps in the CCR registration process. Applicants who are not registered with CCR and Grants.gov should allow at least 21 days to complete these requirements. The process should be started as soon as possible. Any questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or [support@grants.gov](mailto:support@grants.gov).

Special Notices Relative to Grant Applications to be submitted through Grants.Gov:

All attachments to grant applications submitted through [Grants.Gov](http://www.grants.gov) must be in Adobe Portable Document Format (i.e., .PDF files). Proposals with attachments submitted in word processing, spreadsheet, or any format other than Adobe Portable Document Format will not be considered for award.

Process to Obtain a Waiver from the Use of Grants.Gov for Submission of Full Grant Proposals: If a prospective grantee is unable to comply with the requirement to use [Grants.Gov](http://www.grants.gov) "APPLY" for submission of a grant application under this BAA or finds it would be an excessive burden to comply with this requirement, a waiver request may be submitted not less than 30 calendar days prior to the closing date for receipt of Full Proposals. Such request should be submitted by the Electronic Business Point of Contact listed in the CCR for the organization and should contain the Organization/Individual's name, address, telephone number, and email address. The request should state the reason for the request in sufficient detail so a decision can be made. The Waiver Request should be submitted to the ONR Acquisition Department point of contact or Grants Officer listed in the BAA. Such request can be sent by registered mail or email. The "postmark" stamp on the envelope or the time annotated on the email will be used to determine timeliness of the request. A decision and response will be issued within 14 calendar days of receipt of the request by ONR. Foreign Grantees who are not registered in CCR may request a waiver on that basis since CCR registration is integral to the [Grants.Gov](http://www.grants.gov) application process.

Special Notice on Alternate Submission

The following alternative to submitting proposals to the grants.gov website is provided for use under this BAA. Proposals using the alternative submission process will be accepted only if grants.gov is not accepting the proposal and the offeror has called the grants.gov helpline and received a case ticket number. If grants.gov has not within two days by return email validated your proposal submission, call Grants.gov (1-800-518-4726) to obtain a case ticket number. An email from Grants.gov indicating rejection of the grant proposal will not be accepted in place of a Grants.gov case ticket number.

a. Upload the proposal using the form on the following website:  
<http://onroute.onr.navy.mil/asprocessor/BAAPE/>

b. Use this form to upload your grant proposal directly to the Office of Naval Research. All fields in

the form are required to be completed, including the assigned Grants.gov case ticket number. Your completed package should also include a signed, scanned proposal cover sheet with the signature of your authorized organizational representative as part of the 'Attachments Form'. Submit one file per proposal in PDF format. DO NOT submit any parts of the proposal separately. Technical proposals, endorsements, etc. should be on the Grants.Gov ATTACHMENTS form.

c. Use the naming convention below for all uploaded proposals.

\*Convention: (ONRBAA09-XXX\_Topic\_LeadPI\_University.pdf)

\*Example: ONRBAA09-012\_NOPP\_MSMITH\_UNIVRESEARCH.PDF

d. Once a document has been submitted, a "Thank You" page will appear and an email will be sent to the address provided. If you do not receive an email confirmation, your file has not been properly received. You should immediately contact the business point of contact listed in the BAA.

## **V. EVALUATION INFORMATION**

### **1. Evaluation Criteria -**

Award decisions will be based on a competitive selection of proposals resulting from a scientific and cost review. Evaluations will be conducted using the following evaluation criteria:

1. Overall scientific and technical merits of the research proposal:
  - A. The degree of innovation,
  - B. The soundness of technical concept,
  - C. The Offeror's awareness of the applicable literature and state of the art in this research area,
  - D. Anticipated scientific impact (fundamental contribution to the field of Power and Energy).
2. The qualifications, capabilities and experience of the proposed Principal Investigator (PI), team leader and key personnel who are critical in achieving the proposal objectives;
3. The offeror's capabilities, related experience, facilities, techniques or unique combinations of these which are integral factors for achieving the proposal objectives.
4. Potential Naval, Marine Corps, and DoD relevance and contributions of the effort to the agency's specific mission.
5. The realism of the proposed costs and availability of funds.

Overall, the technical factors 1 - 4 above are significantly more important than the cost factor, with the technical factors all being of equal value. The degree of importance of cost will increase with the degree of equality of the proposals in relation to the other factors on which selection is to be based, or when the cost is so significantly high as to diminish the value of the proposal's technical superiority to the Government.

### **2. 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. Cost proposals will be evaluated by Government business professionals. Restrictive notices notwithstanding, one or more support contractors may be utilized as subject-matter-expert technical consultants. Similarly, support contractors may be utilized to evaluate cost proposals. 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.

## **VI. AWARD ADMINISTRATION INFORMATION**

### **1. Administrative Requirements -**

- The North American Industry Classification System (NAICS) code - The North American Industry Classification System (NAICS) code for this announcement is "541712" with a small business size standard of "500 employees".
- Central Contractor Registry (CCR) - Successful Offerors not already registered in the CCR will be required to register in CCR prior to award of any grant, contract, cooperative agreement, or other transaction agreement. Information on CCR registration is available at <http://www.onr.navy.mil/02/ccr.htm>.
- Certifications - Proposals for contracts and assistance agreements should be accompanied by a completed certification package.

### Grants

Grant awards greater than \$100,000 require a certification of compliance with a national policy mandate concerning lobbying. Grant applicants shall provide this certification by electronic submission of SF424 (R&R) as a part of the electronic proposal submitted via [Grants.gov](http://www.grants.gov) (complete Blocks 18 and 19); The following certification applies to each applicant seeking federal assistance funds exceeding \$100,000:

#### **CERTIFICATION REGARDING LOBBYING ACTIVITIES**

(1) No Federal appropriated funds have been paid or will be paid by or on behalf of the applicant, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal contract, grant, loan, or cooperative agreement, the applicant shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The applicant shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including sub contracts, sub grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

#### Grants not through Grants.gov:

Proposers seeking grants or cooperative agreements who have received [Grants.gov](http://www.grants.gov) waiver approval for awards greater than \$100,000 shall complete and submit electronic representations and certifications at the Contracts and Grants Section of the ONR Home Page at [http://www.onr.navy.mil/02/rep\\_cert.asp](http://www.onr.navy.mil/02/rep_cert.asp).

## **VII. OTHER INFORMATION**

### **1. Government Property/Government Furnished Equipment (GFE) and Facilities**

Reserved

## **2. Security Classification**

Reserved

## **3. Use of Animals and Human Subjects in Research**

Reserved

## **4. Recombinant DNA**

Reserved

## **5. 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 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/>.

## **6. Protection of Proprietary and Sensitive Information**

Reserved

## **7. 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. Interim meetings are likely, but these will be accomplished via video telephone conferences, telephone conferences, or via web-based collaboration tools.

## **8. Other Guidance, Instructions, and Information**

None