



SOLICITATION: CEROS-CORE-07-01

Ocean Technology Development, Application and Demonstration in Support of Maritime Military Operations

National Defense Center of Excellence for Research in Ocean Sciences
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1. **BACKGROUND:** The National Defense Center of Excellence for Research in Ocean Sciences (CEROS) is soliciting proposals for concept development and demonstration of ocean technologies for military maritime purposes. Innovative concepts and new approaches are being sought to advance technology, enhance regional capabilities and infrastructure, and demonstrate beneficial maritime military utility for the Department of Defense (DoD).
2. **SCOPE OF PROPOSALS:** Proposals are sought within six broad focus areas:
 - a. *Shallow Water Surveillance Technologies*, emphasizing innovative approaches to collection, processing and presentation of information from and about the shallow (continental shelf depth) maritime operational environment.
 - b. *Ocean Environmental Preservation*, emphasizing innovative system development and demonstrations for ocean environmental sensing, remediation, monitoring and control.
 - c. *New Ocean Platform and Ship Concepts*, emphasizing development and demonstration of innovative designs, advanced structures, or improved techniques.
 - d. *Ocean Measurement Instrumentation and Ocean Engineering Tools*, emphasizing development and demonstration of advanced sensors, innovative undersea systems or facilities, and new techniques for undersea measurement, modeling, prediction, and data exploitation.
 - e. *Unique Properties of the Deep Ocean Environment*, emphasizing new techniques to identify or exploit unique properties, conditions, materials, products or potential of the deep ocean for enhanced maritime operational capability; advanced power sources utilizing batteries, fuel cells, and renewable energy; ocean energy harvesting from waves and currents, gas seeps and gas hydrates, ocean sediments, and water column plankton.
 - f. *Tooth-to-Tail Logistics and Operations and Maintenance Improvement*, emphasizing technologies and techniques for reducing costs relative to the military

maritime mission, infrastructure, Naval shipyard productivity and efficiency, etc, driven by the fact 64% of Navy operations costs are for people.

3. **LEVEL OF EFFORT:** CEROS anticipates approximately \$5M will be available to fund proposals selected under this solicitation, contingent upon receipt of FY07 federal funding. Multiple, firm fixed-price/no-fee contract awards are anticipated as a result of this solicitation. Work shall be structured with a performance period not to exceed 12 months.
4. **ELIGIBILITY:** To be eligible for consideration, the offeror must be a commercial enterprise. Universities and/or government entities may be part of project teams as subcontractors to a commercial enterprise. CEROS encourages proposals involving multiple entities (*i.e.*, teaming) to leverage capabilities, develop regional technology and address priority DoD maritime technology needs.
5. **PROPOSAL SUBMISSION PROCESS:** CEROS shall use a two-step submission process to formulate a Core Program from projects submitted under this solicitation.
 - a. The first step requires submission of a short Abstract.
 - i. CEROS shall evaluate all Abstracts against the evaluation criteria herein on their individual technical merit.
 - ii. **DEADLINE:** To be considered for award offerors shall submit an unclassified Abstract for the proposed effort to CEROS by 12:00 Noon, Hawaii Standard Time, Tuesday, 16 January 2007. Abstracts must be submitted electronically through the website <https://secure.ceros.org> according to the procedure described on that website. An automated acknowledgement of receipt will be returned to the offeror.
 - b. If the Abstract is deemed meritorious, CEROS shall request Full Technical and Firm Fixed-Price/No-Fee Cost Proposals from selected offerors for detailed technical evaluation and potential negotiation under this solicitation.
 - i. CEROS shall specify the format for Full Proposals and other relevant information in a letter of invitation to submit a Full Proposal. In addition, oral presentation of proposal may be requested to clarify approach and address issues, concerns, etc.
 - ii. No selection for negotiation or subsequent funding shall be made under this solicitation without a Full Technical and Cost Proposal.
6. **PROPOSAL ABSTRACT FORMAT**
 - a. The Abstract shall provide an overview of the project and associated cost estimate. Each proposed project shall have a separate submission. The submissions shall be prepared in either PDF or Microsoft Word formats readable by IBM-compatible personal computers. Abstracts submitted by any means other than the specified website shall be disregarded.
 - b. The Abstract shall consist of a cover page and up to four additional pages of project information, including all figures and tables. Abstracts exceeding five (5) pages in total length shall be rejected. Abstracts shall be prepared in the following format: 8.5x11 inch pages; at least ten point type; margins not less than one inch on all sides; and pages numbered.
 - c. The Cover Page shall include the following:
 - i. Title of the proposed effort;
 - ii. Short executive summary (approx. 50-60 words) describing the intended product or result;

- iii. Name, company affiliation, phone/fax numbers, electronic and postal mailing addresses of the Principal Investigator and Administrative Point of Contact;
 - iv. Proposed period of performance;
 - v. Funding required to produce the proposed products;
 - vi. Names and affiliations of sub-contractors and co-investigators; and,
 - vii. Special requirements or considerations (e.g., classified research, requirement for government furnished equipment or military assets).
- d. The Abstract shall include the following sections, each clearly labeled:
- i. **PROBLEM.** State the operational problem faced by the DoD or other national defense agency. Explain why it's hard to solve the problem. Identify specific agency requirement for the technology or device, if any.
 - ii. **STATE OF THE ART.** What is the present technology dealing with the problem and the state-of-the-art? How is the problem solved today? What are the key barriers to solving the problem today?
 - iii. **NEW APPROACH.** What is truly new in your approach? How will your approach allow you to overcome the current technical barriers? What is unique or innovative about your approach? Describe your technical objectives. Describe the specific technical advances and innovation that will be demonstrated by the work.
 - iv. **IMPACT.** If successful, what is the probable impact of your work on present military capability? Use specific quantitative metrics (i.e., improvements in speed, weight, manpower requirements, sensor or weapon resolution/precision/accuracy, safety parameters, false alarm rates, etc) and relate these performance metrics to current state-of-the-art. Describe the anticipated residual benefits to maritime military technology, and the technical relevance to CEROS program objectives.
 - v. **WORK PRODUCTS.** What is the product of this effort (e.g., software, prototype, physical or numerical models, reports, etc)? Describe the expected results and planned deliverables. Discuss patents or other intellectual property that may result from the work.
 - vi. **ONE YEAR PLAN.** Describe:
 - 1. Project Organization.
 - 2. Major work tasks, technical approach and methods to be used. Include schedule, task assignments and major developmental milestones. Address planned risk mitigation efforts.
 - 3. Individuals and subcontractors who will perform the work. Include special capabilities of the work team, special techniques and/or facilities to be used.
 - vii. **SUCCESS CRITERIA:** How will progress and success be measured relative to the metrics listed in 'Impact' section above? Include beginning and ending Technology Readiness Levels (TRL). Criteria for assessing TRLs can be found on www.ceros.org.
 - viii. **LONG TERM TRANSITION.** Discuss plans for obtaining funds for follow-on development, prototype or transitions. If for transition, when will the technology make a transition into an operational capability that can be used by the defense agencies? Who is the ultimate military customer? Identify

specific programs and transition pathways. Provide endorsements from potential users and sponsors of the technology.

- ix. **COST.** How much will the one-year effort cost? Figures to the nearest \$100K are sufficient for the Abstract. Identify other funding sources, either your own or external contributions. Describe how they will be used and/or leveraged with CEROS funding. No profit or fee shall be allowed.

7. SIGNIFICANT DATES AND TIMES (Subject To Change)

FY07 EVENT	DATE
CEROS Post Solicitation	Tues, 5 Dec 06
Abstracts Due	Tue, 16 Jan 07, 1200 Noon
CEROS Requests Full Proposals	Wed, 28 Feb 07
Full Proposals Due	Thu, 29 Mar 07, 1200 Noon
CEROS Notifies Offerors in the Competitive Range	Thu, 17 May 07
Oral Presentations to CEROS	Mon-Tue, 4-5 Jun 07
Contract Negotiations	Jun-Jul 07
Prepare and Execute Contracts	Jun-Sep 07

8. EVALUATION CRITERIA: The following evaluation criteria shall apply to both Abstracts and Full Proposals requested under this solicitation.

- a. Abstract and Full Proposals will be evaluated on the following criteria:
 - i. **QUALITY (40 points).** Technical quality of the proposed effort and its potential to successfully address the technical problem involved and to advance the technical state-of-the-art and maritime military technical competence; relevance to DoD technical needs and the CEROS mission; and, potential importance to intended recipients of the developed technology. Each technically qualified project shall be scrutinized for importance to maritime military needs and potential for near-term application or transition.
 - ii. **APPROACH AND CAPABILITIES (20 points).** Realism of technical approach and methods proposed and potential for attaining stated objectives and milestones on schedule using the techniques and resources described; corporate and individual qualifications for the work; adequacy of equipment, materials and facilities proposed; and, quality of technical risk management and transition plans.
 - iii. **ANTICIPATED BENEFITS (20 points).** Potential for significant technical advancement in maritime military technical capabilities at reasonable cost and in a timely manner; benefit to the DoD and residual value to the region; transition potential; and, potential for generating intellectual property or follow-on support from sources other than CEROS.
 - iv. **COSTS AND BUDGET (20 points).** Cost realism and value of anticipated results for funding requested based on funding guidance given above; schedule and resource efficiency; and, leveraged, cost-saving, or value added aspects to the proposed effort.
- b. CEROS shall select those projects offering the best value based on the criteria set above for negotiations.

- c. Abstracts and Full Proposals will be evaluated on individual merit only and not in comparison to others.

9. OTHER REQUIREMENTS

- a. To be considered for award, a properly formatted Abstract must be received by CEROS through the website specified herein by 12:00 noon, Hawaii Standard Time, Tuesday, 16 January 2007. Abstracts received after that time shall NOT be considered. Offerors responding to this solicitation are wholly responsible for timely submissions.
- b. It is CEROS policy to treat all submissions as competitive information and to disclose the contents only for evaluation purposes. CEROS may use selected consultants as special resources to evaluate Abstract and Full Proposals. These consultants are restricted by agreement from disclosing proposal information or using it for purposes other than the technical assessments for CEROS. By submitting an Abstract to CEROS, an offeror agrees that the project's technical and management information may be disclosed to selected consultants and evaluators for the limited purpose stated above or unless otherwise required by law.
- c. All Abstracts submitted under this solicitation shall be unclassified. If offerors propose to undertake classified work or require access to classified information, they must certify that they have a proper facility clearance and key personnel must be certified as holding a Secret clearance. Abstracts must clearly state that the proposed work will be classified, if applicable.
- d. An invitation from CEROS to submit a Full Proposal does not assure subsequent award. The decision to submit or not submit a Full Proposal is the responsibility of the offeror submitting the Abstract.
- e. Successful offerors shall be required to execute a State of Hawaii Contract for Goods and Services with the Natural Energy Laboratory of Hawaii Authority pursuant to its statutory authority provided under Chapter 227, Hawaii Revised Statutes and Procurement Exemption No. 07-044-J. The Contract General Conditions and Special Conditions, which may be viewed at the CEROS website (www.ceros.org), are subject to negotiation.
- f. Offerors are advised that if awarded a contract under this solicitation, offerors shall, prior to award of the contract, furnish proof of compliance with the requirements of section 3-122-112, Hawaii Administrative Rules. This shall include Chapter 237, tax clearance; Chapter 383, unemployment insurance; Chapter 386, workers compensation; Chapter 392, temporary disability insurance; and Chapter 393, prepaid health care. In addition, to be eligible for award, offerors must either be registered and incorporated or organized under the laws of the State of Hawaii; or be registered to do business in the State of Hawaii.
- g. Pursuant to section 103-10, Hawaii Revised Statutes, contract payments shall be contingent upon the receipt of federal funds.

- 10. ADDITIONAL INFORMATION:** Additional information about CEROS is available at the CEROS website (www.ceros.org), including information from the 13-14 Nov 06 CEROS industry briefing from selected military commands regarding specific technical needs. CEROS reserves the right to select for award all, some, or none of the proposals received in response to this solicitation.