

REQUEST FOR INFORMATION (RFI)

Experimental Forward Operating Base (ExFOB) 2012-1 Camp Lejeune, North Carolina

INTRODUCTION:

This announcement constitutes an RFI notice for planning purposes. This is NOT a Request for Proposals. NO SOLICITATION DOCUMENTS EXIST AT THIS TIME. This RFI does not constitute a commitment, implied or otherwise, that the USMC Experimental Forward Operating Base (ExFOB) Team consisting of the Marine Corps Combat Development Command, Marine Corps Warfighting Laboratory, Expeditionary Energy Office, Marine Corps Systems Command, Marine Corps Training and Education Command and the Office of Naval Research will take a procurement action in this matter. Neither the ExFOB Team nor the Government will be responsible for any cost incurred in furnishing this information.

The USMC ExFOB Team is interested in gathering information to further its understanding of currently available technologies that could enhance the logistics sustainability of remote Forward Operating Bases (FOBs) engaged in combat operations. Specific areas of interest for this RFI include: (1) Wearable Electric Power Conversion and Distribution Systems; and (2) Lightweight, Man-portable, Water Purification Systems for Individual/Fire Team/Platoon Level Internal Resupply. Technologies of interest are those that would most rapidly and effectively enhance the self-sufficiency of forward deployed, individual Marines operating from a FOB or naval shipping. Information is requested in the form of a brief technology description, “working” photographs of technology (no drawings), inclusion of any government reports, tests, demonstrations and/or any currently existing government contractual relationship.

GENERAL BACKGROUND:

Since March 2010, the Marine Corps has held an annual ExFOB event as a venue for industry to demonstrate their latest expeditionary energy capabilities. The primary focus at these demonstrations is to observe and evaluate industry solutions that will enhance the Marine Corps’ self-sufficiency, reduce the energy demand of platforms and systems, and lightening the load of the Marine Corps in current and future expeditionary operations. Over the last two years the ExFOB Team has accelerated “concepts-to-combat” to reduce the Warfighter need for fuel, water and battery logistics. ExFOB has guided the development of new requirements and has informed Marine Corps investment and acquisition decisions.

ExFOB 2012-1 will occur in the first half of the calendar year on Marine Corps Base Camp Lejeune. The intent for ExFOB 2012-1 is to seek solutions supporting the individual Marine/small unit power and water needs specifically focusing on solutions enhancing the combat effectiveness of the Marine Expeditionary Unit (MEU) at sea and when employed ashore.

Information received in response to this RFI is intended to serve two purposes: (1) Technology descriptions will help formulate requirements development to increase the combat effectiveness of the Marine Corps; and (2) Technology descriptions may result in invitations for equipment manufacturers to demonstrate their technologies at the ExFOB 2012-1 at no cost or risk to the

Government, if the manufacturer can prove their product or prototype would be sufficiently developed for a conceptual demonstration by 14 April 2012. This ExFOB demonstration will be conducted in cooperation with the U.S. Army's Enterprise Market Investigation Process (EMIP). (<http://peocscss.tacom.army.mil/EMIP/home.html>)

The ExFOB 2012-1 demonstration period will take place between 30 April and 04 May 2012 aboard Marine Corps Base Camp Lejeune, North Carolina. A three day window on either side of the demonstration will be used for vendor setup and retrograde. Vendors invited to demonstrate their technology will be referred to as "participants" and will be contacted via email with a signed letter of invitation NLT 1 Feb. After this date the Marine Corps will actively engage all participants to determine operations/logistics, data collection plan and retrograde. The actual ExFOB 2012-1 data collection will take place over five days from 0800 to 1600. Participants will be responsible for all containment measures and all water will be demonstrated in a closed loop system. All measures will be taken by the Marine Corps to insure base safety, security and compliance are upheld throughout ExFOB 2012-1. At NO TIME are "goodie bags", "gifts" or alcohol allowed on the ExFOB premise. Participants at the ExFOB can, and will, be asked to leave if they are found to be in violation of the above or acting in an "unsafe" manner at anytime.

SPECIFIC INFORMATION OF INTEREST:

Wearable Electric Power Systems

As the variety of energy consuming devices and batteries in the Marine Corps inventory continues to expand, power source compatibility is becoming a growing concern. The increasing requirement for individual Marines to embark on missions carrying redundant energy in the form of multiple incompatible battery types translates into excessive battery weight and a logistical burden on the individual and the force. The use of wearable, weight-efficient centralized or decentralized power systems is currently frustrated by the differing electric power requirements of, and interfaces to, hand-carried devices. An additional complexity arises from the need to distribute electrical power to various hand-carried devices through electrical conductors and dirt resistant, mechanically robust electrical connectors. Finally, the inability to efficiently harvest and store energy on individuals while both on the move and stationary for varying amounts of time limits the ability to reduce the battery combat load and to extend the power endurance of individuals. Information is requested on lightweight, man-wearable expeditionary solutions that form, or contribute to, a system of systems approach that may include one or more of several components: energy harvesting; efficient, high density, energy storage; electric power conversion and distribution; and, power demand reduction solutions for man-portable energy consuming devices.

Lightweight, Man-portable, Water Purification Systems for Individual/Fire Team/Platoon Level Internal Resupply

The Marine Corps relies on filtration followed by reverse osmosis for purifying large quantities of bulk water from either fresh or salt-water sources. Microbial sanitation of purified bulk water is maintained via chlorination. Water purification at the level of the individual Marine is handled differently. Currently, the USMC utilizes the MIOX pen and MSR In-Line filter for individual level water purification. Purification tablets are also included in the Individual First Aid Kit. As

technology has advanced since these items were initially fielded, the USMC is seeking the next generation water purification solution. The system or technology should be scalable and lightweight using the P248 standards for fresh water. The system or technology would allow for scalability from the individual to the platoon level. In addition, simplicity and durability are critical features of a next generation solution. Power sources should be limited, if possible. If affected by the freezing and thawing process, the potential issues should be addressed.

SUBMISSION PROCESS AND DUE DATE:

Sources capable of fully satisfying these requirements should access the EMIP website below and submit a Technology Application Idea (TAI) as per the directions on the EMIP website. The ExFOB team is partnered with the Army's EMIP. The due date for all submissions is midnight on 2 Dec 2011. Additional information regarding the joint Army/USMC review process and ExFOB 2012-1 industry demonstration shall be provided to those who submit TAIs at: http://peocscss.tacom.army.mil/EMIP/emip_process.html

NOTE: This RFI is issued for the purpose of determining market capability of sources and does not constitute an Invitation for Bid (IFB), a Request for Proposal (RFP), a Request for Quote (RFQ) or an indication that the Government will contract for any of the items and/or services contained in this notice. No solicitation document exists at this time. All information received in response to this notice that is marked Proprietary will be handled accordingly. Information provided in response to this RFI may be shared with other Department of Defense activities. Responses may not include Classified material. Responses to this notice will not be returned. No reimbursement will be made for any costs to provide information in response to this announcement or any follow-up information requests. Information contained herein is based on the best information available at the time for publication, is subject to revision, and is not binding upon the Government. Availability of any formal solicitation will be announced under a separate Federal Business Opportunities (FedBizOpps) announcement.