

REQUEST FOR QUOTATION <i>(THIS IS NOT AN ORDER)</i>			THIS RFO <input checked="" type="checkbox"/> IS <input type="checkbox"/> IS NOT A SMALL BUSINESS SET-ASIDE		PAGE 1 OF 12 PAGES	
1. REQUEST NO. N00167-04-Q-0437	2. DATE ISSUED 04 JUL 23	3. REQUISITION/PURCHASE REQUEST NO. 64400 41567709		4. CERT. FOR NAT. DEF. UNDER BDSA REG. 2 AND/OR DMS REG. 1		
5a. ISSUED BY CONTRACTING OFFICER NSWC CARDEROCK DIVISION			6. DELIVER BY (Date) 05 AUG 15			
5b. FOR INFORMATION CALL (NO COLLECT CALLS)			7. DELIVERY <input checked="" type="checkbox"/> FOB DESTINATION <input type="checkbox"/> OTHER (See Schedule)			
NAME 9500 MACARTHUR BLVD. W BETHESDA, MD 20817-5700 RAY PARK		TELEPHONE NUMBER AREA CODE NUMBER 301 227-1121 FAX: 301 227-1847		9. DESTINATION N00167		
a. NAME		8. TO: b. COMPANY		a. NAME OF CONSIGNEE RECEIVING CODE 3341 BLDG 143 RECEIVING OFFICER NAVAL SURFACE WARFARE CENTER		
c. STREET ADDRESS		b. STREET ADDRESS 9500 MACARTHUR BLVD		c. CITY W BETHESDA		
d. CITY	e. STATE	f. ZIP CODE		d. STATE MD	e. ZIP CODE 20817-5700	
10. PLEASE FURNISH QUOTATIONS TO THE ISSUING OFFICE IN BLOCK 5A ON OR BEFORE CLOSE OF BUSINESS (Date) 04 AUG 10			IMPORTANT: This is a request for information and quotations furnished are not offers. If you are unable to quote, please so indicate on this form and return it to the address in Block 5A. This request does not commit the Government to pay any costs incurred in the preparation of the submission of this quotation or to contract for supplies or services. Supplies are of domestic origin unless otherwise indicated by quoter. Any representations and/or certifications attached to this Request for Quotations must be completed by the quoter.			
11. SCHEDULE (Include applicable Federal, State and local taxes)						
ITEM NO. (a)	SUPPLIES/SERVICES (b)		QUANTITY (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)
0001	REQN. NO. 64400 /41567709 ITEM NAME: PROVIDE PROFESSIONAL SUPPORT SERVICES IN ACCORDANCE WITH THE ATTACHED STATEMENT OF WORK. THIS TASK WILL BE INCREMENTALLY FUNDED.		1	EA		
12. DISCOUNT FOR PROMPT PAYMENT <input checked="" type="checkbox"/>			a. 10 CALENDAR DAYS (%)	b. 20 CALENDAR DAYS (%)	c. 30 CALENDAR DAYS (%)	d. CALENDAR DAYS NUMBER PERCENTAGE
NOTE: Additional provisions and representations <input type="checkbox"/> are <input type="checkbox"/> are not attached			13. NAME AND ADDRESS OF QUOTER		14. SIGNATURE OF PERSON AUTHORIZED TO SIGN QUOTATION	
a. NAME OF QUOTER			b. STREET ADDRESS		16. SIGNER	
c. COUNTY			d. CITY		a. NAME (Type or print)	
e. STATE			f. ZIP CODE		b. TELEPHONE	
					c. TITLE (Type or print)	
					NUMBER	

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SECTION F TIME OF DELIVERY

DELIVERIES SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS

ITEM	QUANTITY	DELIVERY REQUIRED
0001	1 EA	05-AUG-15

52.249-8 DEFAULT (FIXED PRICE SUPPLY & SERVICE) (APRIL 1984)

52.213-4 Terms and Conditions--Simplified Acquisitions (Other Than Commercial Items) (MAY 2004)

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS) clauses that are incorporated by reference:

- (1) The clauses listed below implement provisions of law or Executive order:
 - (i) 52.222-3, Convict Labor (June 2003) (E.O. 11755).
 - (ii) 52.222-21, Prohibition of Segregated Facilities (Feb 1999) (E.O. 11246).
 - (iii) 52.222-26, Equal Opportunity (Apr 2002) (E.O. 11246).
 - (iv) 52.225-13, Restrictions on Certain Foreign Purchases (Dec 2003) (E.O.s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).
 - (v) 52.233-3, Protest After Award (Aug 1996) (31 U.S.C. 3553).
- (2) Listed below are additional clauses that apply:
 - (i) 252.204-7003, Control of Government Personnel Work Product (Apr 1992)
 - (ii) 52.232-1, Payments (Apr 1984).
 - (iii) 52.232-8, Discounts for Prompt Payment (Feb 2002).
 - (iv) 52.232-11, Extras (Apr 1984).
 - (v) 52.232-25, Prompt Payment (Oct 2003).
 - (vi) 52.233-1, Disputes (Jul 2002).
 - (vii) 252.243-7001 Pricing of Contract Modifications (Dec 1991)
 - (viii) 52.244-6, Subcontracts for Commercial Items (May 2004).
 - (ix) 52.253-1, Computer Generated Forms (Jan 1991).

(b) The Contractor shall comply with the following FAR and DFARS clauses, incorporated by reference, unless the circumstances do not apply:

- (1) The clauses listed below implement provisions of law or Executive order.
 - (i) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (Jan 2004) (E.O. 13126). (Applies to contracts for supplies exceeding the micro-purchase threshold.)
 - (ii) 52.222-20, Walsh-Healey Public Contracts Act (Dec 1996) (41 U.S.C. 35-45) (Applies to supply contracts over \$10,000 in the United States, Puerto Rico, or the U.S. Virgin Islands).
 - (iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212) (Applies to contracts

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of \$25,000 or more).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793). (Applies to contracts over \$10,000, unless the work is to be performed outside the United States by employees recruited outside the United States.) (For purposes of this clause, United States includes the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.)

(v) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212) (Applies to contracts of \$25,000 or more).

(vi) 52.222-41, Service Contract Act of 1965, As Amended (May 1989) (41 U.S.C. 351, et seq.) (Applies to service contracts over \$2,500 that are subject to the Service Contract Act and will be performed in the United States, District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, Johnston Island, Wake Island, or the outer continental shelf lands).

(vii) 52.223-5, Pollution Prevention and Right-to-Know Information (Aug 2003) (E.O. 13148) (Applies to services performed on Federal facilities).

(viii) 252.225-7001, Buy American Act and Balance of Payments Program (Apr 2003) (Applies to all contracts for supplies unless an exception is authorized by DFARS 225.1101(2) (i) through (iv)).

(ix) 252.225-7013, Duty-Free Entry (Apr 2003) (Applies to all contracts for supplies except those supplies that will not enter the customs territory of the United States).

(x) 52.232-33, Payment by Electronic Funds Transfer-- Central Contractor Registration (Oct 2003). (Applies when the payment will be made by electronic funds transfer (EFT) and the payment office uses the Central Contractor Registration (CCR) database as its source of EFT information.)

(xi) 52.232-34, Payment by Electronic Funds Transfer-- Other than Central Contractor Registration (May 1999). (Applies when the payment will be made by EFT and the payment office does not use the CCR database as its source of EFT information.)

(xii) 252.247-7023, Transportation of Supplies by Sea (May 2002) Alternate III (May 2002) (Applies when transporting any supplies by sea under this contract.)

(2) Listed below are additional clauses that may apply:

(i) 52.204-7, Central Contractor Registration (Oct 2003) (Applies to all contracts unless an exception is authorized by FAR 4.1102(a).)

(ii) 252.204-7004, Alternate A (Nov 2003) (Applies if FAR 52.204-7 is applicable.)

(iii) 52.209-6, Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (July 1995) (Applies to contracts over \$25,000).

(iv) 52.211-5 Material Requirements (Aug 2000) (Applies to contracts for supplies that are not commercial items).

(v) 52.211-17, Delivery of Excess Quantities (Sept 1989) (Applies to fixed price supplies).

(vi) 252.225-7002, Qualifying Country Sources as Subcontractors (Apr 2003) (Applies if the contract is subject to the DFARS clause 252.225-7001, Buy American Act and Balance of Payments Program (see (b)(1)(viii) above)).

(vii) 52.243-1, Changes--Fixed Price (Aug 1987)

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(Applies to fixed-price contracts for supplies).
 (viii) 52.243-1, Changes--Fixed Price (Aug 1987) Alternate I (Apr 1984) (Applies to fixed price contracts for services, other than architect-engineer or other professional services, and no supplies are to be furnished).
 (ix) 52.243-1, Changes--Fixed Price (Aug 1987) Alternate II (Apr 1984) (Applies to fixed price contracts for services (other than architect-engineer services, transportation, or research and development) and supplies are to be furnished).
 (x) 52.243-1, Changes--Fixed Price (Aug 1987) Alternate V (Apr 1984) (Applies to fixed price contracts for research and development).
 (xi) 52.247-29, F.o.b. Origin (Jun 1988) (Applies to supplies if delivery is f.o.b. origin).
 (xii) 52.247-34, F.o.b. Destination (Nov 1991) (Applies to supplies if delivery is f.o.b. destination).
 (xiii) 52.222-42, Statement of Equivalent Rates for Federal Hires (May 1989) (Applies if the contract amount is expected to be over \$2,500 and the contract is subject to the clause 52.222-41, "Service Contract Act of 1965, As Amended" (sec (b) (1) (vi) above)).

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

This Statement is for Information Only:

It is not a Wage Determination

Employee Class	Monetary Wage--Fringe Benefits
_____	_____
_____	_____
_____	_____

(xiv) 52.246-11 Higher-Level Contract Quality Requirement (Feb 1999) (Applies to contracts when the contracting officer finds it is in the Governments interest to require that higher-level quality standards be maintained and such standards are selected and identified in the clause).

The Contractor shall comply with the higher-level quality standard selected below. [If more than one standard is listed, the offeror shall indicate its selection by checking the appropriate block.]

Title	Number	Date	Tailoring
* _____	_____	_____	_____
* _____	_____	_____	_____
* _____	_____	_____	_____
* _____	_____	_____	_____

[Contracting Officer insert the title, number (if any), date, and tailoring (if any) of the higher-level quality standards.]

(C) FAR 52.252-2, Clauses Incorporated by Reference (Feb 1998). This contract incorporates one or more clauses

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by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

FAR clauses - <http://www.arnet.gov/far/>
DFARS clauses - <http://www.acq.osd.mil/dp/dars/dfars.html>

(d) Inspection/Acceptance. The Contractor shall tender for acceptance only those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its postacceptance rights--

(1) within a reasonable period of time after the defect was discovered or should have been discovered; and

(2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(e) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence, such as acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(f) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges that the Contractor can demonstrate to the satisfaction of the Government, using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred that reasonably could have been avoided.

(g) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all

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rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(h) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(End of clause)

Your quotation must include the following information:

Price list number and date

or

Cost breakdown by direct labor (list categories, hours and pay rates). In addition to the direct rates, provide the applicable indirect information (C&A), overhead, facilities capital cost of money (FCCM) and profit.

or

Applicable General Services Administration (GSA) contract number.

If unable to quote FOB, Destination, please complete the following:

FOB Point _____

Estimated Shipping Charge _____

Business size:

Large _____ Small _____ Nonprofit _____

Cage Code _____

Tax Identification Number (TIN) _____

DUNNS _____

ELIGIBILITY REQUIREMENTS

All contractors and individuals doing business with the Federal Government must be registered at the Contractor Central Registration Database located at:
<http://ccr.dla.mil/>.

ELECTRONIC DISTRIBUTION OF CONTRACT DOCUMENTS

All contract award and contract modification documents will be distributed electronically using the Navy Air

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Force Interface (NAFI) system. The contractor's copy will be provided in portable document format (pdf) as an attachment to an e-mail that will be sent to the contractor by the NAFI system. A pdf file may be accessed using Adobe Acrobat Reader software. This is a free software that may be downloaded at:

<http://www.adobe.com/products/acrobat/readstep.html>

Provide the following information that will be used to make electronic distribution for any resultant contract:

Name of Point of Contact to Receive
Distribution _____

Phone Number for Point of Contact _____

E-Mail Address for Receipt of Distribution _____

USE OF THE GOVERNMENTWIDE COMMERCIAL PURCHASE CARD

Will you accept the Governmentwide Commercial Purchase Card as a method of purchasing supplies and/or services.

_____ Yes _____ No

Will you accept the Governmentwide Commercial Purchase Card as a method of payment for your invoice.

_____ Yes _____ No

DUTY FREE ENTRY

Will any materials being shipped to the Government require a duty-free entry certificate for foreign supplies.

_____ Yes _____ No

If yes, please include dollar amount \$ _____

Statement of Work

1. Title

1.1. Scientific Investigation of Fuel Cells for Navy and Marine Applications.

2. Objective

2.1. *The Contractor will investigate the benefits of fuel cells for Marine Corps and Navy applications and determine if they can be used to charge small lithium ion batteries. This effort will include a study of two systems, a methanol fuel cell for Marine Corps applications and a seawater semi-fuel cell for surveillance applications.*

3. Requirements

3.1. *The Contractor must have a bachelor's degree in materials science with at least 3 years related experience and must demonstrate an understanding of fuel cell technology as it relates to Navy or Marine Corps system needs. Prior experience within the 6.2 development of the Navy and Marine Corps power sources is required. The Contractor's knowledge must include experience in portable fuel cells, such as methanol, and a metal/water semi fuel cell system. The Contractor's should possess market research knowledge for portable fuel cell systems and other power sources within the 50-500 watt range with specific experience developing and testing methanol fueled fuel cell systems. There should be a clear understanding of how electrochemical systems are characterized including knowledge of constant current/power discharges and cyclic voltammetry. In order to assess the benefits of fuel cells to recharging lithium polymer cells in the field, the Contractor must have, hands-on experience with cycling of these systems. Experience must be demonstrated in the following electrochemical techniques:*

3.1.1. *Discharge of fuel cells or semi-fuel cells under constant current or constant load.*

3.1.2. *Cycling of rechargeable lithium polymer batteries under constant current or constant load.*

3.1.3. *Experience in battery systems such as MACCOR or TechWare is strongly encouraged.*

3.2. *Scope of Work: The Contractor will assess methanol fuel cells and a seawater semi-fuel cell.*

3.3. *The seawater semi-fuel cell performance shall be characterized as a function of:*

- 3.3.1. Carbon type, at least 2 different materials
 - 3.3.2. Anode Material, at least 2 different aluminum, 1 magnesium
 - 3.3.3. Sea water temperature, at least 3 temperatures
 - 3.3.4. Oxygen content, at least 2, one of which simulates a littoral environment and the other deep ocean
 - 3.3.5. Cell Design, at least 2
 - 3.3.6. Current Density, at least 3
 - 3.3.7. Catalyst, at least 1
 - 3.3.8. As a result of the information gathered in Section 4.1, the Contractor in consultation with the Technical Point of Contact will identify the optimal fuel cell components. Fuel cells, employing these components, will be assembled. This design will undergo characterization including tests to determine the feasibility of using this technology to charge a small lithium ion cell in a littoral environment. At least 3 tests shall be conducted to verify this concept.
- 3.4. The methanol fuel cell shall be assessed to determine the state of the art and its usefulness to the military. To accomplish this task the Offeror shall conduct a literature search and contact scientists working in the field. The result of this effort shall be a report noting the benefits and disadvantages of the fuel cell. The report shall include suggestions of areas requiring further research.
4. The Contractor shall work at the government facility located in West Bethesda, MD.
 5. The government shall provide workspace and necessary resources to the contractor if available.
 6. The government shall provide equipment to analyze the various fuel cell and lithium battery technologies. These include:
 - 6.1. MACCOR Cyclers
 - 6.2. Techware Cyclers
 - 6.3. Environmental Chambers

6.4. Seawater baths

6.5. Oxygen Meters

6.6. Various materials to assemble a semi-fuel cell including: aluminum/magnesium anodes, carbon electrodes, and separator materials

6.7. Lithium ion cells for comparison purpose

7. Performance and Delivery

7.1. All technical work shall be completed no later than 12 months from date of award.

7.2. Laboratory notebooks, containing information performed during this investigation, shall remain the property of the government. The laboratory notebook shall contain an accurate and detailed account of the investigation so that a published paper in a journal or conference is achievable. All notes shall be clearly written and updated daily. Graphs and data reduction shall be placed in the laboratory notebook.

7.3. The Contractor shall provide technical information to the Project Technical Lead in the form of scientific reports, EXCEL spread sheets, graphs or Power Point Presentations.

7.4. Travel: Local and or long distance travel may be required to meet project objectives. The technical lead will alert the Contractor when and where travel is required. It is expected that long distance travel will be required for the following places: 1 trip to Rayovac (Madison, Wisconsin), 1 trip to the Electrochemical Society Meeting (Quebec City, Canada), 1 trip to Ball Aerospace (Boulder Colorado).

7.5. Technical Point of Contact: Dr. Patricia H. Smith. (301) 227-4168

7.6. Services Information: The Contractor shall not exercise personal judgment on behalf of the Government. The Government shall not assign sub-tasks or prepare work schedules but shall allow the Contractor to meet delivery schedules established in the overall task or project. The technical lead shall monitor work via contractor reports as requested.

Enclosure: 4 Proposal Evaluation Criteria

PROPOSAL EVALUATION

Proposals shall be evaluated on the basis of best value to the government. This will be weighted toward technical value more than best cost.

1. Technical competence in the realm of fuel cells with major emphasis on portable, methanol fuel cells. 20%
2. Technical competence in the area of metal/seawater semi fuel cells for low power applications. 20%
3. Technical competence in the knowledge and use of battery cycling equipment such as MACCOR and Techware units. 20%
4. Prior exploratory development (6.2) experience in support of Navy and Marine Corp programs. 20%.
5. Availability of the contractor to work at the Carderock, West Bethesda site. 20%

NAME OF OFFEROR OR CONTRACTOR

THE FOLLOWING INFORMATION IS NEEDED FOR ESTABLISHING PRICE REASONABLENESS:

QUANTITY OR DOLLAR VALUE OF SERVICES SOLD IN PAST YEAR:

LIST TWO (2) GOVERNMENT AGENCIES AND TWO (2) COMMERCIAL COMPANIES THAT HAVE PURCHASED IN THE PAST YEAR

1. _____

2. _____

3. _____

4. _____

LABOR RATES HAVE BEEN IN EFFECT SINCE:

(DATE)

TITLE OF PERSONNEL UTILIZED _____

NUMBER OF LABOR HOURS _____

HOURLY LABOR RATE _____

COST OF MATERIAL _____

DESCRIPTION OF MATERIAL USED _____

NAME AND TELEPHONE NUMBER OF YOUR DCAA POC _____