

July 28, 2011

Dear Prospective Offeror:

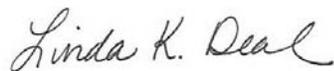
REQUEST FOR PROPOSAL (RFP) NO. 182509

The U. S. Department of Energy's (DOE) Basic Energy Sciences (BES) Program is soliciting offers for one (1) Nanocluster Deposition System. Battelle operates the Pacific Northwest National Laboratory for DOE and any resultant agreement will be between Battelle and the winning contractor.

Information regarding the goods and services required and instructions for preparation and submission of proposals are contained in the attached RFP. Battelle requests the submission of your best pricing proposal in support of the Technical Specifications and other requirements as detailed in this RFP.

As the sole point of contact, requests for clarification should be submitted by e-mail to me at linda.deal@pnl.gov. The established due date for this RFP is **August 4, 2011**.

Sincerely,



Linda K. Deal
Contract Specialist





Proudly Operated by **Battelle** Since 1965

REQUEST FOR PROPOSAL NO. 182509

Offer Due: August 4, 2011, 4:00 pm PST

Delivery Required Date: TBD

<p>CONTRACT REPRESENTATIVE Linda Deal MSIN: K9-15 Battelle Boulevard P.O. Box 999 RICHLAND, WA 99352-0999</p> <p>Tel: 509/371-7603 Fax: 509/375-3818 E-mail: linda.deal@pnnl.gov</p>	<p>SHIP TO: PO #TBD Battelle for US DOE 3335 Q Avenue Richland, WA 99354 United States</p>
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This is a request for proposal for a **Nanocluster Deposition System**. Proposals should be initially submitted on the most favorable price and technical terms which can be offered because of the possibility that award will be made without discussion of proposal received.

Submit all offers on the form below showing unit and total prices for meeting the stated required delivery date. If unable to meet stated date, offer best delivery date.

LINE ITEMS

Line	Qty	U/M	Description	Unit Price	Total Price
1	1	EA	Nanocluster Deposition System per attached Technical Specification.		
2	1	EA	Onsite (Richland, WA) installation and training.		

BATTELLE CONTRACTS REPRESENTATIVE

The Battelle Contracts Representative, **Linda Deal**, is the sole point of contact for any communications or questions regarding this acquisition.

PRICING INFORMATION

- A. Prices proposed herein are substantiated with enclosed copy of published price lists and/or catalog price sheets including conditions of any available discounts and are not more than those offered our most favored purchasers for similar quantities under like conditions.
- B. Published price list and/or catalog price sheets are not available. The prices proposed herein are not more than those offered our most favored purchasers including the United States Government for similar quantities under like conditions. If checked, include copies of recent invoices, sales slips, etc., for similar quantities of like material or services to at least two (2) other firms for verification.

Signed _____

Date _____

SUBMISSION OF PROPOSALS

Proposals should be prepared simply and economically, and provide a straightforward, concise delineation of the information required to be furnished. Emphasis should be on completeness and clarity. Elaborate brochures or other presentations are neither required nor desired.

Each proposal submitted should include:

1. A statement of acceptance of the conditions referenced in the General Provisions below.
2. Completed Commercial Representations and Certifications found at http://www.pnl.gov/contracts/documents/forms/representations_certifications_ci.pdf.
 - The NAICS code for section 2(a)(1) is **334516**
 - The size standard for section 2(a)(2) is **500 employees**
3. A price offer with all information requested herein.
4. A Technical Proposal, prepared in a manner consistent with the attached Specification. The Technical Proposal shall definitively indicate compliance, paragraph by paragraph, with the requirements outlined in the Specification and shall be supported by cross-referenced documentation as necessary.

Proposals are preferred to be electronically submitted to linda.deal@pnl.gov. Transmittals containing proposals should include "**Proposal to RFP No. 182509**" in the subject line. Proposals must be received by Battelle no later than **August 4, 2011**.

Proposals may also be submitted via facsimile at the number above or by hard copy the address above. Correspondence must include "**Proposal to RFP No. 182509.**" Proposals submitted by overnight mail must be mailed to

Battelle, Pacific Northwest Division
6th Street Warehouse
790 6th Street
ATTN: Linda Deal, K9-15
Richland, WA 99354

GENERAL PROVISIONS

Each proposal submitted shall include a statement of acceptance of the conditions referenced below. The conditions may be viewed as at <http://www.pnl.gov/contracts/documents/>.

- Fixed-Price General Provisions other than Commercial Items – Supplies and Services, titled Form A-409.3-FP (Feb 2010)

EXPLANATION TO PROSPECTIVE OFFERORS

Any prospective offeror desiring an explanation or interpretation of the RFP must request it in writing soon enough to allow a reply to reach all prospective offerors before the submission of their offers. Oral explanations or instruction given before the award of the contract will not be binding. Any information given to a prospective offeror concerning the RFP will be furnished promptly to all other prospective offerors as an amendment of the solicitation, if that information is necessary in submitting offers or if the lack of it would be prejudicial to any other prospective offeror.

PROPOSAL DUE DATE AND VALIDITY PERIOD

Proposals shall be delivered to Battelle on or before the proposal due date and shall be valid for a minimum of **90** days.

AMENDMENTS TO RFP

If this RFP is amended, all provisions which are not modified remain unchanged.

Offerors shall acknowledge receipt of any amendment of this RFP (a) by signing and returning the form provided for such purpose; (b) by stating in its proposal that the amendment (date and number) was received and considered in formulating the proposal; or (c) by letter or E-mail. Battelle must receive the acknowledgement by the time specified for receipt of proposals.

SUBMISSION, MODIFICATION, REVISION, AND WITHDRAWAL OF PROPOSALS *(CL 605, OCT 2007)*

1. Offerors are responsible for submitting proposals, and any modifications or revisions, so as to reach the Battelle office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:00 p.m., local time, for the designated Battelle office on the date that proposal or revision is due.
2. Any proposal, modification, or revision received at the Battelle office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Battelle Contracts Representative determines that accepting the late offer would not unduly delay the acquisition; and--
 - A. If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Battelle, Pacific Northwest Division, infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or
 - B. There is acceptable evidence to establish that it was received at the Battelle site designated for receipt of offers and was under Battelle's control prior to the time set for receipt of offers; or
 - C. It is the only proposal received.
3. However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Battelle, will be considered at any time it is received and may be accepted.
 - A. Acceptable evidence to establish the time of receipt at the Battelle site 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 Battelle personnel.
 - B. If an emergency or unanticipated event interrupts normal Battelle processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Battelle requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Battelle processes resume.
 - C. Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award. Proposals may be withdrawn in person by an offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.
 - D. Unless otherwise specified in the solicitation, the offeror may propose to provide any item or combination of items.
 - E. Offerors shall submit proposals in response to this solicitation in English and in U.S. dollars unless otherwise permitted by the solicitation.
 - F. Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.
 - G. Offerors may submit revised proposals only if requested or allowed by the Battelle Contracts Representative.

H. Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Battelle Contracts Representative

4. Offer expiration date. Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the offeror).
5. Restriction on disclosure and use of data. Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by Battelle except for evaluation purposes, shall--

A. Mark the title page with the following legend:

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

B. Mark each sheet of data it wishes to restrict with the following legend:

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

TREATMENT OF PROPOSAL DATA

- A. Although not specifically requested by the RFP, the proposal may include technical data and other data, including trade secrets and/or privileged or confidential commercial or financial information, which the Offeror does not want disclosed to the public or used by PNNL or the Government for any purpose other than proposal evaluation. To protect such data, the Offeror will specifically identify each page including each line or paragraph thereof containing the data to be protected and mark the cover sheet of the proposal with the following notice:

NOTICE

The data contained in pages ____ of this proposal have been submitted in confidence and contain trade secrets and/or privileged or confidential commercial or financial information, and such data shall be used or disclosed only for evaluation purposes. PNNL and the Government shall have the right to use or disclose the data herein to the extent provided in the contract. This restriction does not limit PNNL's and the Government's right to use or disclose data obtained without restriction from any source, including the Offeror.

Reference to this notice on the cover sheet should be placed on each page to which the notice applies. PNNL assumes no liability for disclosure or use of unmarked data and may use or disclose such data for any purpose.

- B. Should a contract be awarded based on a proposal, it is policy, in consideration of the award, to obtain unlimited rights for the Government in technical data contained in the proposal unless the prospective contractor marks those portions of the technical information that he asserts as "proprietary data," or specifies those portions of such technical data that are not directly related to or will not be utilized in the work to be funded under this subcontract. "Proprietary data" are defined as technical data which embody trade secrets developed at private expense, such as design procedures or techniques, chemical composition of materials, or manufacturing methods, processes, or treatments, including minor modifications thereof, provided that such data: (1) are not generally known or available from other sources without obligation concerning their confidentiality; (2) have not been made available by the owner to others without obligation concerning their confidentiality; and (3) are not already available to the Government without obligation concerning their confidentiality. An Offeror who receives a contract award shall mark the data identified as proprietary by specifying the appropriate proposal page number to be inserted in the Rights to Proposal Data clause below. Subject to the concurrence of PNNL, information unrelated to the subject may be deleted from the proposal by the Offeror. The

responsibility, however, of identifying technical data as proprietary or deleting it as unrelated rests with the Offeror.

- C. The following clause shall be included in any contract based on a proposal. This clause is intended to apply only to technical data and not to other data, such as privileged or confidential commercial or financial information

RIGHTS TO PROPOSAL DATA

Except for technical data contained on pages _____ of the contractor's proposal dated _____, which are asserted by the Contractor as being proprietary data, it is agreed that as a condition of the award of this contract, notwithstanding the provisions of any notice appearing on the proposal, the Government shall have the right to use, duplicate, and disclose and have others do so for any purpose whatsoever, the technical data contained in the proposal upon which this contract is based.

ANTI-KICKBACK PROCEDURES (CL 398 - JUL 1995)

A. Definitions

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to Battelle, Battelle employees, subcontractor, or subcontractor employees for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by Battelle for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with Battelle.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by Battelle or a subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than Battelle, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to Battelle or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

- B. **The Anti-Kickback Act of 1986** (41 U.S.C. 51-58) (the Act), prohibits any person from -

1. Providing or attempting to provide or offering to provide any kickback;
2. Soliciting, accepting, or attempting to accept any kickback; or
3. Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime contractor to the United States or in the contract price charged by a subcontractor to a prime contractor or higher tier subcontractor.

- C. 1. When the Contractor has reasonable grounds to believe that a violation described in paragraph B of this clause may have occurred, the Contractor shall promptly report to the Battelle Contracts Representative in writing the possible violation. Such reports shall be made to the inspector general of Battelle, and Battelle shall forward such reports to DOE, or the Department of Justice.

2. The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph B of this clause.
3. The Battelle Contracts Representative may (i) offset the amount of kickback against any monies owed by Battelle under the prime contract and/or (ii) direct that the prime Contractor withhold from sums owed a subcontractor under the prime contract, the amount of the kickback. The Battelle Contracts Representative may order that monies withheld under subdivision C.3.(ii) of this clause be paid over to DOE unless Battelle has already offset those monies under subdivision C.3.(i) of this clause. In either case, the Prime Contractor shall notify the Battelle Contracts Representative when the monies are withheld.
4. The Contractor agrees to incorporate the substance of this clause, including this subparagraph C.4, in all subcontracts under this contract which exceed \$100,000.

BID AND PROPOSAL COSTS

Battelle is not obligated to pay any cost incurred in the preparation and submission of a proposal, nor to enter into a contract or any other arrangement with any Offeror.

ALTERNATE PROPOSALS

Battelle is inviting proposals in full accordance with the attached specifications or description. In the event that offeror is unable to submit a proposal responsive to this requirement and offeror believes they have an item(s) which may otherwise be acceptable, offerors are invited to submit a proposal for Battelle's consideration, stating item by item each incidence of noncompliance. Offerors are hereby advised that Battelle shall not be obligated to evaluate this proposal, but if acceptable, this Solicitation will either be canceled and reissued or revised to incorporate any appropriate changes. In the event offeror chooses not to submit a proposal, a short note of explanation would be appreciated.

TYPE OF CONTRACT

Battelle contemplates awarding a fixed price contract for this request.

TECHNICAL SPECIFICATION

The enclosed Technical Specification, dated July 28, 2011, outlines the requirements for this solicitation.

INSURANCE

As required in the referenced Environment, Safety, and Health clause herewith the Contractor must provide a valid insurance certificate prior and review the PNNL Visitor Guide, <http://www.pnl.gov/contracts/esh-procedures/>, prior to any work performed on-site.

PROMPT PAYMENT DISCOUNTS

In addition to normal payment terms, please advise amount and details of other cash discounts or savings available to Battelle for more expeditious or favorable methods of payment or for other reasons.

AUTHORIZED NEGOTIATORS

If a negotiation meeting is held, the Offeror shall designate as its negotiator a person who is authorized to make legally binding commitments without further review or approval. If, for any reason, it is impractical for the Offeror to be represented at a negotiation meeting by other than a person fully authorized to act in its behalf, Battelle shall be notified sufficiently in advance to allow a decision to be made whether the negotiations should proceed as scheduled or be postponed. The Offeror's notice, if originally given orally, shall be confirmed in writing.

CONTRACT AWARD

a) Battelle may evaluate proposals received in response to this solicitation without discussion. Contract award, if any, will be made to the responsive, responsible offeror whose evaluated proposal will be most advantageous to Battelle, considering only price and any price-related factors specified elsewhere in the solicitation, or

(b) Battelle may reject any or all proposals, and waive informalities or minor irregularities in proposals received, or

(c) Battelle may accept any item or combination of items, unless doing so is precluded by a restrictive limitation in the solicitation or the proposal, or

(d) Battelle may reject a proposal as non-responsive if the prices proposed are materially unbalanced between line items or sub-line items. A proposal is materially unbalanced when it is based on prices significantly less than prices for some items and prices which are significantly overstated in relation to prices for other items, and if there is a reasonable doubt that the proposal will result in the lowest overall price to Battelle even though it may be the low evaluated proposal, or if it is so unbalanced as to be tantamount to allowing an advance payment.

EXPORT CONTROL (cl. 387 - February 2011)

For each article, deliverable, good, software program, or product, Contractor shall provide to Battelle the item's Commerce Control List (CCL) Export Control Classification Number (ECCN), or, if applicable, the item's USML category. Contractor shall provide this information using the Export Control Information Reporting Form located at <http://www.pnl.gov/contracts/documents/>. If requested, Contractor shall also provide reasonable assistance, at no additional charge, to enable Battelle to validate the CCL ECCN or USML category. Contractor agrees to indemnify and hold harmless Battelle, its officers, agents, and employees from any and all federal fines or other penalties resulting from Contractor's failure to provide Battelle with accurate export controls information. This provision shall survive the expiration or termination of the contract.

We offer to sell the above items (or alternate items as specified) at the prices indicated, on the terms and conditions stated and the referenced general provisions which will be a part of any resulting order.		F.O.B. DESTINATION PRE-PAID or INTERNATIONAL: DDP	
		Delivery Date at F.O.B. Point:	
		Terms of Payment PNNL standard payment terms are N30 payment terms, if prompt payment discounts are available, please state	
Firm Name	Offer Date	Weight	Recommended Carrier
Dimensions	Number of Boxes	Origin Zip Code	
Telephone No.	Fax No.	Email Address	
Name/Title	Signature		

Technical Specifications Nanocluster Deposition System

Introduction

The ability to control precisely the composition and shape of molecules, clusters and larger nanostructures immobilized on surfaces is crucial for the development of next generation materials with carefully tailored properties for a wide range of energy-related applications. The Nanocluster Deposition System Pacific Northwest National Laboratory (PNNL) is seeking will enable the controlled synthesis of a broad range of nanoscale materials with well-defined composition and size for fundamental studies in chemical physics, ion-surface interactions and catalysis. This deposition system, combined with the state-of-the-art analytical capabilities at PNNL, will contribute to the grand challenges in basic energy science to “design and perfect atom- and energy-efficient syntheses of new forms of matter with tailored properties” and to “understand emergent phenomena” on the nanoscale.

PNNL is seeking a Nanocluster Deposition System that employs radiofrequency magnetron sputtering and gas aggregation to produce intense continuous beams of ionized clusters and nanoparticles for controlled deposition onto surfaces. It must generate clusters of a wide variety of substances, including metals, mixed-metal alloys, metal oxides, metal sulfides, metal carbides and heterogeneous core-shell nanoparticles. The system should enable the size and composition of the clusters to be tuned and measured. It shall allow a particular size of particle to be selected for deposition onto surfaces. The system must enable the kinetic energy of the nanoclusters to be adjusted for either low-energy soft landing or high-energy implantation into the surface. It should allow the surface to be heated and rotated to enable annealing and formation of even coatings. The system shall allow the thickness of the films to be monitored during deposition. The device must be equipped with a load-lock chamber and magnetic manipulators to enable straightforward introduction of substrates and removal of finished materials from the ultra-high vacuum deposition chamber.

Technical Specifications for Equipment Requested

1. Radiofrequency (RF) magnetron sputter gas aggregation cluster source with three independently controlled magnetrons in a single aggregation region with variable aggregation length (cluster size = 0.4 to 15 nm, deposition rate up to 10 nm/min)
2. Computer controlled high mass quadrupole mass analyzer/filter (mass range = 10 to 10^6 amu, resolution = 2%)
3. Movable quartz crystal microbalance film thickness monitor.
4. Load lock sample introduction system with magnetic sample manipulation.
5. Ultra high vacuum (UHV) deposition chamber (base pressure $<10^{-9}$ Torr).
6. Substrate rotation (20- 80 rpm) and heating to 850°C.
7. DC/RF substrate bias for sample cleaning and control of deposition kinetic energy.

Additional Requirements

1. High resolution low mass quadrupole mass analyzer/filter (mass range = 4 to 4000 amu, resolution = $M/\Delta M$ 1500)
2. On-site installation and training shall be included.
3. Instrumentation shall have a minimum 12 month warranty on non-consumable items.