

Expression of Interest

Uranium Processing Facility Microwave Casting Furnace

B & W Y-12 National Security Complex

B&W Y-12, L.L.C., (hereafter known as “Y-12”; for additional company information, see website www.y12.doe.gov), acting under its Prime Contract No. DE-AC05-00OR22800 with the United States Department of Energy (DOE), is soliciting an Expression of Interest (EOI) for the design with an option to fabricate, test, and provide installation support for the Microwave Casting Furnace for use at the Y-12 National Security Complex in Oak Ridge, Tennessee.

This request for EOI does not constitute an invitation for sealed bids, a request for proposals, or offers. **This EOI is explicitly for the design with an option to fabricate, test, and provide installation support for Microwave Casting Furnaces.** The purpose of this request is to identify prospective and qualified small business firms. Responses received will be used for planning purposes and determining candidates for subsequent procurement actions, if any. It is the Company’s intent to make this procurement a Small Business Set-Aside if adequate small business participation is available. However, firms of any size that meet the criteria below are encouraged to submit the required criteria.

After evaluating responses to the EOI, the company will determine if an adequate number of qualified small businesses are interested to allow for a competitive Small Business Set-Aside. If so, the company will issue a Request for Proposal (RFP) to the qualified small businesses which responded to the EOI. If it is determined a sufficient number of small businesses are not available, the company will issue a Request for Proposal to small and large businesses. Firms that do not respond affirmatively to all the qualifying criteria during the EOI phase will not be eligible for subsequent procurement actions.

The North American Industry Classification (NAICS) Code for this EOI is 333994. The small business size standard is 500 employees. The following criteria has been established for vendors interested in the opportunity to design with the option of fabrication, testing, and installation of the Microwave Casting Furnace. Please provide a brief statement to support each affirmative response.

Description and characteristics of equipment:

Operating Temperature	1350 to 1500 °C
Minimum Heating Rate	7.5 °C/min.
Maximum Applicator Operating Pressure	5 psig
Minimum Applicator Operating Pressure	2×10^{-2} Torr
Maximum Time to Reach Minimum Operating Pressure	30 min.
Charge Mass	10 to 40 with a mean of 20 kg
Charge Material	Uranium
Combined Charge and Molding Stack Mass	300 to 1000 with a mean of 400 kg
Applicator Internal Atmosphere	Argon
Furnace Configuration	Bottom Loading

- A. Has your organization designed, fabricated, tested, and provided installation support for Microwave Casting or Heating Furnaces as a product for at least five years?

Yes No

If Yes, provide at least three references with customer name, customer contact, approximate value of contract, pictures of Microwave Casting Furnace and date of product delivery. Compare Microwave Furnaces you have designed and manufactured previously to the requirements stated herein.

- B. Does your organization have experience designing and fabricating to the codes and standards listed below?

Yes No

If response is no, explain how compliance with these requirements would be met

Characteristic	Acceptance
Applicator and Connected Piping Pressure Containment	API 520 ASME B31.3 ASME B&PVC Section VIII Division 1
Furnace Safety	NFPA 86, Class B
Operator Safety	10 CFR 835 10 CFR 851 29 CFR 1910
Electrical Safety	NFPA 70 NFPA 79 UL-508 UL-508A 29 CFR 1910, Subpart S
Seismic Design	AISC N690 ASCE 4 ASCE 43
Charge Surveillance	Video Camera Pyrometer

Does your organization have the facilities required to perform verification testing of the requirements noted above? If not, explain how these facilities would be acquired.

Yes No

- C. Does your organization have previous experience melting metal to produce metal castings (graphite permanent – mold method) using microwave technology?

Yes No

If response is yes, please describe your experience

- D. Does your organization or team have the facilities, equipment, and personnel required to design, fabricate and perform verification testing of a Microwave Casting Furnace prior to delivery, and then provide installation support of the Microwave Casting Furnace?

Yes No

If response is yes, provide a description of your organizations facilities and personnel qualifications.

If response is no, provide the name of the organization(s) that would be providing the design, fabrication facilities and personnel required to complete this project.

- E. Does your organization have a quality program?

Yes No

If response is yes, complete and return the attached Supplier Qualification Questionnaire and provide a copy of any third party audits conducted during the past three years.

- F. Has your organization participated in the generation of an ASME NQA-1 certified design, product fabrication, and/or testing service?

Yes No

If response is yes, provide recent examples

- G. Does your organization have a Commercial Grade Dedication Program (CGD)?

Yes No

If response is yes, provide a list, by title, of your organizations CGD implementing procedures.

- H. Can your company supply hardware which is UL-508A approved?

Yes No

If response is yes, provide a statement on how your organization accomplishes this.

- I. Is your company a United States owned company, or alternatively are you a company with at least 51% of the cost to manufacture your product arising from U.S. content?

Yes No

If response is no, provide the country(s) of manufacture.

- J. Does your organization or team currently have an existing Microwave Casting Furnace available for testing purposes?

Yes No

Additional Information

Technical documents for this project may contain Unclassified Controlled Nuclear Information (UCNI), Export Control Information (ECI), Official Use Only (OUO) and /or International Traffic in Arms Regulations (ITAR) information. These classifications require special information security preparations on the part of the short-listed subcontractors prior to receiving an RFP. Therefore, all Subcontractor, Sub-Tier and/or Teaming Partners' personnel assigned to participate in the solicitation and subsequently, if awarded the subcontract, personnel assigned to the design, optional fabrication and installation support must be U. S. Citizens

Path Forward

After receipt and evaluation of the data required to be submitted with the EOI, it is expected that discussions may be held with your organization in order to further understand your organization's capabilities and qualifications. Y-12 anticipates release of a solicitation package only to those qualified organizations responding to the EOI.

One or more vendors may be selected to perform Phase 1 and Phase 2. Then a single vendor will be selected for Phases 3 and 4 based on the results of the integrated test assembly which consists of the Sellers supplied furnace with the Company supplied glovebox enclosure and casting stack.

Scope

The scope is divided into four parts:

- 1) Phase 1 - Design
- 2) Phase 2 – An option for fabrication of 1 prototype unit
- 3) Phase 3 – An option for fabrication / factory acceptance test of 5 production units
- 4) Phase 4 – An option for installation oversight

If your firm meets the participation criteria stated above and are interested in responding to this notice, please respond by 09/20/13. Upon request, you may be requested to provide additional documentation to substantiate your responses to the above questions. Your response is to be provided by mail or electronically to the contact listed below. If you do not respond affirmatively to all the qualifying criteria you will not be considered for subsequent procurement actions.

All correspondence relative to this Expression of Interest must be submitted no later than 09/20/13 to:

B & W Y-12, LLC
90 Union Valley Road
Oak Ridge, TN 37830
Attn: Keith Griffith
Mail Stop 8042
Phone: 865-574-2403
E-Mail: griffithkd@y12.doe.gov