

*GAEA-C5*  
High Performance Computing System  
Supporting Critical Numerical Climate and  
Weather Prediction

Proposal Preparation Instructions

September 11, 2020

**Attachment 2, RFP No. 6400016493**

**Proposal Preparation Instructions**  
**Version Change Control Table**

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## Proposal Preparation Instructions

Oak Ridge National Laboratory, managed by UT-Battelle, LLC, is referred to as Laboratory and/or Company throughout. Offeror shall submit a single electronic copy of their entire proposal to the UT-Battelle Procurement Officer using the instructions provided in the Gaea-C5 - High Performance Computing System Supporting Critical Numerical Climate and Weather Prediction (C5) RFP Cover Letter. That single proposal shall contain two separate files (proposal volumes) as described below. A printed version of the Offeror proposal is not required. All submitted material will be scanned for the presence of viruses, malware and other malicious elements. Any file found to be corrupted will be deleted and may render an Offeror's proposal as non-responsive.

An Offeror may submit more than one proposal associated with this RFP. Each proposal must be fully standalone meeting all of the requirements described herein.

Unless otherwise specified, all proposals shall be prepared using an 8½ by 11 in. page size, portrait orientation, with a minimum font size of 11 points. "Page limit" is defined as consecutively numbered pages. Page limits for each proposal volume are stated in Table 1. Electronic copies of the complete proposal shall be in Microsoft Office 2010 or later (Word, Excel, PowerPoint, Project), PDF format, or Rich Text format. To reduce the review time by the Laboratory, the proposal shall include an editable version of each document in its native format.

Proposal volumes may contain cover pages, cover letters, restrictions for use and dissemination of that material, and other similar front matter. Proposals shall also include a Table of Contents (TOC) and may similarly include a List of Figures or List of Tables. None of these materials count against the page limit for the C5 Technical Proposal.

Response templates from Offerors that include the individual RFP requirements as part of their response may adjust the total page limit (excluding front matter) to 150 pages.

There is no page limit for the Business Management Proposal.

Offeror's proposal submission should be structured in accordance with Table 1.

- Proposal volumes shall not be consolidated; each volume shall be a separate file. Electronic folders should include the Offeror's company name.
- Electronic file titles should identify the Offeror's company name, corresponding volume number, and description.
- Individual electronic files up to 25MB can be received via UT-Battelle's email system. Files may be zipped and compressed. If individual files exceed 25MB or the attempt to deliver the files is unsuccessful for whatever reason, the Offeror may contact the Procurement Officer to arrange for an electronic file transfer.

**Table 1. C5 Proposal Format**

<b>VOLUME—SECTION NUMBER</b>
<p><b>C5 Technical Proposal (100-page limit, Sections 1-14, with up to 50 additional pages (total of 150 pages) to allow inclusion of the RFP requirements in the response. Page count excludes front matter.)</b></p> <ul style="list-style-type: none"> <li>Section 1. Introduction</li> <li>Section 2. Program Overview</li> <li>Section 3. High-Level System Design</li> <li>Section 4. Benchmarks</li> <li>Section 5. C5 Compute Partition</li> <li>Section 6. Input/Output Subsystem</li> <li>Section 7. High-Performance Interconnect</li> <li>Section 8. Base Operating System, Middleware and System Resource Management</li> <li>Section 9. Front-End Environment</li> <li>Section 10. System Management and RAS Infrastructure</li> <li>Section 11. Local Area Networks and Services</li> <li>Section 12. Maintenance and Support</li> <li>Section 13. C5 Facilities Requirements</li> <li>Section 14. Project Management</li> </ul>
<p><b>Business Management Proposal (No page limit)</b></p> <ul style="list-style-type: none"> <li>Section 1. Cover Letter from Authorized Representative</li> <li>Section 2. Solicitation and Offer Form</li> <li>Section 3. C5 System Price Summary</li> <li>Section 4: Other Documents                             <ul style="list-style-type: none"> <li>4.1. Small Business Subcontracting Plan</li> <li>4.2. Exhibit 2: Representation of Limited Rights Data and Restricted Computer Software</li> <li>4.3. Royalty Information</li> <li>4.4. Software Branding and Licenses</li> <li>4.5. System Warranty Information</li> <li>4.6. Representations and Certifications</li> <li>4.7. Equal Employment Opportunity (EEO) Pre-Award Clearance Request Form</li> <li>4.8. Safety-Related Requirements</li> <li>4.9. Exceptions to Provisions of the Solicitation</li> </ul> </li> <li>Section 5. Financial Information</li> <li>Section 6. Supplier Attributes</li> <li>Section 7. C5 Bill of Material</li> </ul>

## 1. C5 Technical Proposal

Offeror shall follow the directions contained in Attachment 1, RFP 6400016493 (Gaea-C5 High Performance Computing System Supporting Critical Numerical Climate and Weather Prediction - Statement of Work (SOW)), Appendix A, Technical Volume Instructions.

## 2. C5 Business Management Proposal

### 2.1 Cover Letter from Authorized Representative

Offeror shall:

- a) Submit a cover letter manually or digitally signed by an agent or individual authorized to by the Offeror, and
- b) Ensure the person signing a proposal initials each erasure or change made to any form.

If this RFP is amended, all terms and conditions that are not amended remain unchanged.

### 2.2 Solicitation and Offer Form

Offeror shall complete the Solicitation and Offer Form.

### 2.3 C5 System Price Summary

Offeror shall fully complete the price schedule contained in the Price Summary tab of Attachment 3, *C5 Price Schedule Template.xlsx* spreadsheet.

Offeror shall provide a firm fixed price for each system offered. The price proposed for each element shall include all software and software license costs. An entry shall be made for each line item. If the price of a line item is being offered at "No Charge" to the Laboratory, insert "NC" for that entry. If a line item is not separately priced, insert "NSP" for that entry.

Hardware maintenance or related costs are the responsibility of Seller prior to system acceptance. Software maintenance, licensing or related costs are the responsibility of Seller prior to system acceptance. Delivery, installation and integration of subcontracted items are the responsibility of Seller.

Offeror may describe a preferred payment schedule that reflects separate system acceptance milestones (and associated payment dates) for key items. For example, the delivery and acceptance of the Front End Environment and Test and Development System may occur across multiple calendar periods, separate from the C5 system.

Maintenance for any specific system will begin upon the date of acceptance of that system. This may result in (initially) inconsistent start and end dates for the maintenance periods for those accepted systems. As necessary, Laboratory will adjust or extend the maintenance period for all C5 system components such that each maintenance period is co-terminus with the compute system(s).

Offeror may assume that Laboratory will complete prepayment of system maintenance and support on no less than a quarterly basis.

Offeror may include additional options that it thinks would be of interest to the Laboratory.

The price shall include all delivery, installation and integration, and decommissioning costs as noted in Sections 13.8 and 13.9 of the Statement of Work.

## **2.4 Other Documents**

### **2.4.1 Small Business Subcontracting Plan**

Offeror shall submit their Small Business Subcontracting Plan (see FAR 52.219-9) or the Company form Representations Regarding Subcontracting Plan with an explanation of why you are not required to submit a small business subcontracting plan. If you are required to submit a subcontracting plan, you should use the form available at [http://www.ornl.gov/adm/contracts/art\\_forms.shtml](http://www.ornl.gov/adm/contracts/art_forms.shtml). At a minimum, your plan is to mirror or exceed the Small Business Administration's public goals. These goals are:

- Small Business - 23%
- Woman-Owned Small Business - 5%
- Small Disadvantaged Business - 5%
- HUBZone Small Business - 3%
- Veteran-Owned Small Business - 3%
- Service-Disabled Veteran-Owned Small Business - 3%

Offeror should take into consideration these goals when developing your proposal.

### **2.4.2 Representation of Limited Rights Data and Restricted Computer Software**

Offeror shall complete, sign and submit the ORNL form entitled "Exhibit 2 - Representation of Limited Rights Data and Restricted Computer Software".

### **2.4.3 Royalty Information**

If a proposal in response to this solicitation contains costs or charges for royalties or license fees totaling more than \$250.00, the following information should be included in the response relating to each separate item of royalty or license fee: name and address of licensor; date of license agreement; patent numbers, patent application serial numbers, or other basis on which the royalty is payable; brief description, including any part or model numbers of each item or component on which the royalty is payable; percentage or dollar rate of royalty per unit; unit price of item; number of units; and total dollar amount of royalties.

In addition, if specifically requested by the UT-Battelle Procurement Officer before award, the Offeror should furnish a copy of the current license agreement and an identification of applicable claims of specific patents or other basis upon which the royalty may be payable.

### **2.4.4 Software Branding and Licensing**

Offeror should submit licensing policies for *all* categories of software (compilers, libraries, application development tools, etc.) that will be provided under any resulting subcontract. Identify all third-party software. Include policies for cluster-wide right-to-use licenses for an unlimited number of users for all software that will be delivered under any resulting subcontract. Include any required software license or maintenance agreement. The following conditions shall be incorporated in any resulting license agreement or maintenance agreement:

- The governing laws of the state of Tennessee will apply.

- The right of assignment and any associated license agreement is required.

An Offeror's proposal may be eliminated from consideration for award in the event the Offeror and the Laboratory cannot mutually agree to the terms and conditions contained in any software license or maintenance agreement.

#### **2.4.5 System Warranty Information**

Offeror shall provide warranty information for all Offeror-provided items as well as any third-party subcontracted items.

#### **2.4.6 Representations and Certifications**

Offeror shall complete, sign, and submit the ORNL Representations and Certifications form.

#### **2.4.7 EEO Pre-award clearance Request Form**

Offeror shall complete and include ORNL's EEO Pre-Award Clearance Request Form with items 3, 4, 8, and 9 completed. [Prospective awardees of subcontracts of \$10 million or more are subject to preaward compliance evaluations by the Office of Federal Contract Compliance Programs (OFCCP), unless within the preceding 24 months OFCCP has conducted an evaluation and found the prospective awardee to be in compliance with Executive Order 11246.]

#### **2.4.8 Safety Related Requirements**

Environmental, safety, and health requirements are specific to ORNL. The associated requirements are incorporated into the subcontract(s), terms and conditions, provisions, or attachments.

#### **2.4.9 Exceptions to Provisions of the Solicitation**

Offeror shall provide any exceptions taken to the provisions of the solicitation. If exceptions will be taken (including exceptions to Terms and Conditions, Special Articles, forms or Exhibits), they must be 1) provided with your offer and 2) must be submitted in Microsoft Word, version 2016 or later, with track changes enabled. The terms on our website in PDF can be converted to Word or can be obtained from the Procurement Officer. Be advised that taking exception will be taken in to account when evaluating your proposal and may result in your offer being considered non-responsive.

### **2.5 Offeror Financial Information**

To assist the Laboratory in assessing the financial capability of the Offeror, the Offeror shall demonstrate that their financial condition is suitable for an award. Offeror may submit any or all of the following.

- Audited and certified balance sheets and profit and loss statements for the Offeror's company for the last six completed financial quarters, including interim statements for the current quarter.
- Copies of Form 10-K filed with the Securities and Exchange Commission for the past 2 fiscal years, plus any 10-Q Forms filed since the last Form 10-K.
- Affirmative assurance, such as endorsements from financial institutions, that the company has sufficient funds necessary to perform the work.



- The percentage of the performing organization's estimated total revenue during the period of performance the proposed subcontracts will represent.
- The distribution of the last complete fiscal year's sales volume among commercial business, US Government prime contracts, and subcontracts under US Government prime contracts.
- Any other relevant and useful information about the financial health of the company that will assist the Laboratory in assessing the financial capability of the Offeror.

## **2.6 Supplier Attributes**

### **2.6.1 Past Performance**

Describe active or completed contracts during the past four (4) years that the Offeror considers the most comparable to this RFP. Include: client; contract number; contract type; contract value; contract effective date and term; place of performance; client contacts (include the name and phone number of contractual contact and the name and phone number of technical contact); and similarities to C5 requirements. Reference Section 3.2.1(3) for additional information.

### **2.6.2 Manufacturing Facilities**

Describe the manufacturing and testing facilities of the Offeror's company.

### **2.6.3 Key Personnel**

Describe the expertise and skill level of the company's named personnel (Executive Liaison and Technical Project Manager) who will work on this project as described in Section 14.1 of the SOW.

Describe the anticipated expertise and breadth of skill for the two system analysts. Describe the complementary skills of these positions.

### **2.6.4 Participating Subcontractors**

Describe any use of subcontractors or third parties for major software, hardware components, or services and associated areas of risk and risk mitigation. Describe relevant and recent previous experience with the proposed subcontractors and the experience that the subcontractors had on projects for similar equipment or services

## **2.7 C5 Bill of Materials**

Provide a detailed equipment list for each system, including software, with the manufacturer name and part number for all significant items. Do not include cost data on the BOM. The BOM should reflect in significantly greater detail each of the elements from the Price Summary.

### **3. Proposal Evaluation and Award Information**

#### **3.1 Evaluation Method and Basis for Selection**

The C5 evaluation will be performed by staff members of Oak Ridge National Laboratory (ORNL). ORNL is managed by UT-Battelle, LLC, under Prime Contract DE-AC05-00OR22725 with DOE. ORNL operates under procurement policies and procedures consistent with its respective Prime Contract.

The C5 Statement of Work contains the technical requirements that will support critical numerical climate and weather prediction requirements of the National Oceanic and Atmospheric Administration (NOAA). The C5 system, acquired as part of the Strategic Partnership between Oak Ridge National Laboratory (ORNL) and NOAA, is expected to provide numerical climate and weather prediction capabilities for the time period 2021-2026.

An award resulting from this RFP may be made to the responsible Offeror who submits a proposal that is determined to provide the best value to the Laboratory considering both technical merit and price and the trade-offs between price and technical merit (e.g., the value in selecting a higher priced proposal against the technical merit of the proposal).

The technical evaluation process consists of the proposals being reviewed, evaluated, and rated using a qualitative graded system that assesses the degree of compliance with the Technical Criteria requirements and the level-of-performance risk. Each Technical Criterion will be graded based on the following ratings:

- Blue – Proposal exceeds the performance or capability requirements necessary for acceptable subcontract performance and provides little or no risk to the Laboratory.
- Green – Proposal meets the performance or capability requirements necessary for acceptable subcontract performance and provides low-to-moderate risk to the Laboratory.
- Yellow – Proposal marginally meets the performance or capability requirements necessary for acceptable subcontract performance or provides moderate-to-high risk to the Laboratory.
- Red – Proposal fails to meet the performance or capability requirements necessary for acceptable subcontract performance or provides unacceptable risk to the Laboratory. Proposal is unawardable.

An overall Technical Rating will also be assigned based on the individual ratings and their relative importance. The overall color rating may include increments represented as plus (+) or minus (-).

Laboratory reserves the right to (1) make a selection on the basis of an initial proposal; (2) negotiate with any or all Offerors for any reason; (3) award a subcontract based on all or part of an Offeror's proposal, including any options contained in the proposal; (4) reject any or all proposals and make no award; (5) waive any minor irregularities in any proposal; (6) cancel this request for proposal (RFP) at any time prior to award without cost to the Laboratory or the Government.

#### **3.2 Evaluation Factors**

Evaluation Factors that Laboratory shall consider include:

- Technical Criteria (Section 3.2.1)
  - Performance Features of the Proposed Solution

- Feasibility of Successful Performance
- Supplier Attributes
- Price (Section 3.2.2)
- Options (Section 3.2.3)

The Technical Criteria are ranked in order of descending importance. Performance Features of the Proposed Solution are more important than Feasibility of the Solution. Feasibility of the Solution is more important than Supplier Attributes. The aggregate evaluation of the Technical Criteria, subject to funding constraints, is more important than Price. Additional Considerations are less important than Price. Options are less important than Additional Considerations.

### **3.2.1 Technical Criteria**

The Technical Criteria are:

#### **3.2.1.1 Performance Features of the Proposed Solution**

- a. Laboratory will validate that an Offeror's technical proposal satisfies the Mandatory Requirements and Mandatory Option Requirements. Failure to satisfy the Mandatory Requirements and Mandatory Option Requirements will result in the Offeror's proposal being considered non-compliant and no further evaluation will be made.
- b. Laboratory will assess how well an Offeror's technical proposal addresses the Mandatory Requirements and Mandatory Options. An Offeror is not solely limited to discussion of these features. An Offeror may propose other features or attributes if the Offeror believes they may be of value to the Laboratory. At the discretion of the Laboratory, consideration may be given to proposed features and attributes in the evaluation process. In all cases, the Laboratory will assess the overall value of each proposal.
- c. Performance:
  - How well the proposed solution meets the overall programmatic objectives expressed in the SOW.
  - The degree to which the technical proposal meets or exceeds the Target Requirements and Technical Option Requirements.
  - The functionality of the proposed system. The reliability, availability, and serviceability of the system.
  - The delivered performance of the system as defined by *V*.
  - The physical plant requirements including facilities modifications for installation, system footprint, overall floor space, power, and cooling.
  - Credible roadmaps for hardware and software.
  - The proposed hardware and software support models and how these models will provide no less than 5 years of practical system maintenance.

#### **3.2.1.2 Feasibility of Successful Performance**

The successful performance of the system is critical to achieving NOAA's programmatic objectives.

- Laboratory will assess the likelihood that the Offeror's machine(s) will work as proposed.
- Laboratory will assess the risks to both the Offeror and the Laboratory associated with the proposed solution, as well as the Offeror's assessment of those risks.

- Laboratory will evaluate how well the proposed technical approach and solutions align with the Offeror's corporate product roadmap, product strategy, and the level of corporate commitment to the project.
- Laboratory will assess the proposed delivery schedule relative to the delivery requirements for the system.
- Laboratory will consider the realism of the proposed schedule including its relationship to the Offeror's development, manufacturing, testing facilities, and support offering.
- Laboratory will evaluate the realism and completeness of the proposed project plan.

### **3.2.1.3 Supplier Attributes**

Laboratory will evaluate the following supplier attributes.

#### **a. Capability**

- Offeror's experience and past performance in providing high-end computing systems and its demonstrated commitment to high-end computing customers.
- Offeror's demonstrated commitment to providing high-end computing systems over the long term.
- Offeror's demonstrated ability to meet complex schedule and delivery obligations.
- Offeror's demonstrated ability to work as a member of a successful mission-critical integration project.
- Offeror's ability to ensure the responsiveness of its partners to the performance requirements for the duration of the subcontract.
- Offeror's history of working with third parties to ensure third-party software or other components operate correctly on the system.
- The expertise and skill level of Offeror's key personnel.
- The contribution of the key personnel to the management plan for successful and timely completion of the work.
- Offeror's ability to diagnose and to determine the root cause of hardware and software problems in a timely manner.
- Offeror's manufacturing and testing facilities ability and availability to support successful and timely completion of the work.

Laboratory may solicit information concerning the Offeror's record of performance from other sources and use it in the evaluation.

#### **b. Financial Condition**

An Offeror's and subcontractor's financial condition is of critical importance to the Laboratory. The successful Offeror shall have significant, verifiable financial resources to perform the work, including the ability to satisfy the obligations under subcontracts proposed to conduct the work.

- Offeror's financial condition (refer to Section 2.5 of this document).

### **3.2.2 Price**

Laboratory will evaluate the following price-related factors.

- Reasonableness of the total proposed price and the prices of proposed components and options in a competitive environment.
- Reasonableness, transparency, and flexibility of the Offeror's price risk-sharing model for commodities or technologies.
- Proposed price compared to the value.
- Total cost of ownership including siting, power, cooling, floor space costs, capital and license costs, maintenance costs, and operating costs among others.
- Price trade-offs and options embodied in the Offeror's proposal.

### **3.2.3 Options**

Any technology refresh options or alternate configuration proposed by the Offeror may be awarded by the Laboratory at their sole discretion.