

Subcontract

between

UT-Battelle, LLC

and

[Vendor]

DRAFT

SECTION. A – Agreement Form

A.1 Subcontract Type: The type of Subcontract is Firm Fixed Price.

Issued By:	Name and Address of Seller
UT-Battelle LLC	
c/o Oak Ridge National Laboratory	
P.O. BOX 2008, Bldg. 5700	
Oak Ridge, TN 37831-6024	

A.2 Brief Description of Supplies or Services: Non-Recurring Engineering and Center of Excellence Support

A.3 Table of Contents:

TABLE OF CONTENTS					
(X)	Sec.	Description	(X)	Sec.	Description
X	A	Agreement Form	X	F	Performance Period and Payment Information
X	B	Supplies or Services and Prices/Costs	X	G	General Provisions
X	C	Specifications/Statement of Work	X	H	Special Provisions
	D	Delivery, Shipping, Packaging	X	I	List of Attachments
	E	Inspection and Acceptance			

A.4 Submit Invoices To: UT-Battelle LLC – Accounts Payable
 Email pdf file to ornlap@ornl.gov
 or Fax to 865-241-1080

A.5 Total Amount of Subcontract: \$ TBD

<p>Seller's Agreement. Seller agrees to furnish and deliver the items or perform services to the extent stated in this document for the consideration stated in this subcontract. The rights and obligations of the parties to this subcontract are subject to and governed by this document and any documents attached or incorporated by reference.</p>	<p>Award. UT-Battelle, LLC (Company) agrees to award this Subcontract to Seller. The rights and obligations of the parties to this Subcontract are subject to and governed by this document and any documents attached or incorporated by reference.</p>
<p>(X) Seller is required to sign and return a copy of this document. (Checked if applicable)</p>	<p>UT-Battelle, LLC</p>
<p>A. Signature of person authorized to sign for Seller</p>	<p>A. Signature of person authorized to sign</p>
<p>B. Name of signer:</p>	<p>B. Name of signer:</p>
<p>C. Title of signer:</p>	<p>C. Title of signer:</p>
<p>D. Date</p>	<p>D. Date</p>

Milestones for ORNL Center of Excellence (CoE) for Application Porting and Tuning					
Milestone	Title	Company's share	Amount Funded	Date Funded	Authorized to Start Work

OPTIONS

The Company shall have the option to purchase individual subtasks and additional Center of Excellence tasks described as follows:

- 1.
- 2.
- 3.

Option 1, Table 1

Milestone No.	Title	Pricing			Start of Term (When funding is needed)
		Total Price	Seller's Share	Company's Share	

In the event the Company does not exercise any option by the time specified in Section F for the exercise of such option, or any other date mutually agreed to, the Seller shall be relieved of its obligation to furnish items under options not already exercised.

SECTION C – Specifications/Statement of Work

C.1 Statement of Work

The statement of work entitled, “ _____ ” is made a part of this Agreement, see attachment 1.

SECTION F – Performance Period and Payment Information

F.1. Performance Period. The performance period of this subcontract shall begin on TBD and end on TBD .

F.2. Payment Terms The payment terms are Net 30 Days - No discount.

F.3. Electronic Funds Transfer (EFT). Electronic Funds Transfer (EFT) expedites payments to subcontractors and is our preferred method of payment. A remittance notification (email or fax) is automatically generated to you at the time of payment. To sign up for EFT, revise your banking information, or contact us to verify your current payment information, visit <http://www.ornl.gov/adm/contracts/eft.shtml>.

F.4. Vendor Account Status System. For detailed payment information or inquiries concerning invoices and payments visit the UT-Battelle, LLC Accounts Payable Vendor Status System (VASS) at <http://www.ornl.gov/adm/ap/> or email your questions to ornlap@ornl.gov.

F.5. Invoicing

F.6. The Seller shall submit a proper invoice for payment in accordance with the negotiated terms to the address shown in the block titled "Send Invoices To" on the first page of this document. Each invoice shall reflect milestones or services complete and billable under the Agreement. All payments will be made in U.S. Dollars.

F.7 Price-Share Information

Each invoice shall also include the following:

- 1) Amount invoiced for payment
- 2) Amount of the Seller's price-share associated with the individual payment being billed
- 3) A running cumulative total amount of the billings and the price-share
- 4) Seller will include a breakdown of the project costs by milestone that were given to the Company during the proposal phase. Notwithstanding, Seller is not required to give any actual costs or hours.

F.8 Milestone Payment Schedule

The Milestone Payment Schedule is in Attachment _____.

SECTION G – General Provisions

NOTE: Standard government forms (SF) mentioned herein are available at <http://www.gsa.gov/forms>. Other forms, clauses, articles, and documents are available at our web site, <http://www.ornl.gov/adm/contracts/documents.shtml>.

NOTICE:

This contractor and subcontractor shall abide by the requirements of 41 CFR 60-1.4(a) [41 CFR 60-1.4(b) for Construction], 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, protected veteran status or disability.

To the extent applicable, the employee notice requirements set forth in 29 CFR Part 471, Appendix A to Subpart A, are hereby incorporated by reference into this agreement.

Any Representations and Certifications submitted by the Seller that resulted in this document are incorporated by reference.

All articles and documents incorporated by reference, including those made a part of General Provisions, apply as if they were set forth in their entirety.

General Terms and Conditions - Fixed Price (08/29/2023)

DO NOT INCLUDE SALES OR USE TAXES

See Blanket Certificate of Resale at <http://www.ornl.gov/adm/contracts/documents.shtml>.

SECTION H – Special Provisions

NOTE: Standard government forms (SF) mentioned herein are available at <http://www.gsa.gov/forms>. Other forms, clauses, articles, and documents are available at our web site, <http://www.ornl.gov/adm/contracts/documents.shtml>.

All articles and documents incorporated by reference, including those made a part of Special Provisions, apply as if they were set forth in their entirety.

H.1 Technical Direction

The clause, Technical Direction (Jan 2006), is incorporated by reference and amended as follows:
"Performance under this subcontract is subject to the technical direction of the Company's Technical Project Officer (TPO):"

The TPO for the entire subcontract and specifically NRE is _____.

TPO Name:

TPO Telephone No:
TPO Email Address.:

H.2 Key Personnel

The following personnel are considered to be essential to the work being performed hereunder:

- 1.
- 2.
- 3.

The Seller must notify the Company before diverting any listed person(s) to another program, providing justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on the program. No diversion shall be made without the consent of the Company; provided, that the Company may ratify a diversion in writing and the ratification shall constitute consent. The list of key personnel may be revised by mutual agreement during the period of this Agreement.

H.3 Key Subcontractor

For purposes of this clause a Key Subcontractor is a Subcontractor performing a significant portion of the work under this Agreement, relative to cost or technical function. The Key Subcontractor's performance is critical to the successful completion of the Seller's work requirements. As a Key Subcontractor the Company may be interested in performing on-site Quality surveys in order to assess the capability and progress of their portion of the work. The Key Subcontractor(s) specified below:

- 1.
- 2.
- 3.

are considered to be essential to the work being performed hereunder. The subcontract award to the Seller is based on use of the Key Subcontractor(s) for the work specified above. Prior to diverting any of the specified work to another Subcontractor, the Seller shall notify the Company reasonably in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on the program. No diversion shall be made without the consent of the Company required by this clause.

H.4 U.S. National Laboratories and Government

The work performed under this subcontract is of interest to other National Laboratories and DOE. The Seller agrees that Company may share and otherwise distribute deliverables, information, data, software, and any correspondence provided by the Seller under this Subcontract with personnel at the listed US National Laboratories and the US Government.

- 1.
- 2.
- 3.
- 4.

- 5.
- 6.
- 7.

H.5 Milestone Payment Clause (May 2010)

H.6 Exhibit 9, Technical Data (June 2011)

H.7 Patent Waiver

RESERVED

H.8 Center of Excellence

RESERVED

H.9 Small Business Subcontracting Plan

The Seller's commercial Small Business Subcontracting Plan approved _____ is incorporated into this Agreement, see Attachment _____.

H.10 Data Rights and Assertions

RESERVED

H.11 Right to Audit

At any time or times before Final Payment, the Procurement Officer may have Seller's invoices or vouchers and statements of cost audited. Any payment may be (1) reduced by amounts found by the Procurement Officer not to constitute allowable costs or (2) adjusted for prior overpayments or underpayments.

H.12 Software Assurance Requirements

RESERVED

SECTION I – List of Attachments

1. OLCF-6 CLASS WAIVER W(C) 2024-004
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

STATEMENT OF CONSIDERATIONS

CLASS WAIVER OF THE GOVERNMENT'S DOMESTIC AND FOREIGN PATENT RIGHTS AND COPYRIGHTS UNDER DOMESTIC FIRST AND SECOND-TIER SUBCONTRACTS, ISSUED BY OAK RIDGE NATIONAL LABORATORY (ORNL) UNDER DOE PRIME CONTRACT NO. DE-AC05-00OR22725 FOR OAK RIDGE LEADERSHIP COMPUTING FACILITY UPGRADE PROJECT (OLCF-6)

WAIVER NO. W(C) 2024-004

The U.S. Department of Energy (DOE) Office of Science (SC) mission is to deliver scientific discoveries and major scientific tools to transform our understanding of nature and advance the energy, economic, and national security of the United States (U.S.). DOE SC is the nation's largest federal sponsor of basic research in the physical sciences and the lead federal agency supporting fundamental scientific research for our nation's energy future. DOE's mission to advance our nation's economic security through transformative science and technology solutions encompasses U.S. leadership in computational and data science critical to U.S. economic strength, driving the development of new technologies, and sustaining a world-leading workforce in advanced technology.

To this end, the U.S., DOE, and SC have been leaders in High Performance Computing (HPC) and computational science for decades, especially at the very high end of Leadership Computing, that pushes forward the frontiers of computing technology. Leadership computing capabilities are critical to DOE's basic and applied research programs because they provide researchers with the computational environment to explore natural and engineered systems that are too large, too complex, too dangerous, too small, or too fleeting to explore experimentally. Maintaining U.S. leadership in computational science requires deployment of state-of-the-art computational infrastructure with a relatively short lifespan that requires upgrade every four to six years.

The Advanced Scientific Computing Research (ASCR) program in the Office of Science currently manages the Leadership Computing Facility (LCF) with two designated sites: the Oak Ridge Leadership Computing Facility (OLCF) at Oak Ridge National Laboratory (ORNL), and the Argonne Leadership Computing Facility (ALCF) at Argonne National Laboratory (ANL) to provide architectural diversity, risk mitigation, and a balanced deployment timeline that delivers agility around vendor technology offerings. On behalf of the ASCR program, ORNL anticipates awarding two subcontracts (fixed price and nonrecurring engineering [NRE], if needed) to upgrade to next generation computing system for the OLCF (OLCF-6).

The mission of OLCF (and ALCF) is to:

- Enable high-impact, grand-challenge science and engineering that cannot be performed without access to leadership-class resources; and
- Procure and operate powerful computing and data resources that are among the most advanced in the world based on scientific community requirements.

The OLCF fulfills this mission by providing access to these leadership class resources on a competitive, merit-review basis to researchers in U.S. industry, institutions of higher education, National Laboratories, and other federal agencies. Today, OLCF, currently represented by Frontier, provides diverse computational platforms for the nation's largest scale simulations, data-intensive science, and artificial intelligence (AI) applications to enable the DOE scientific mission across a wide range of disciplines up to exascale speeds and capabilities. These capabilities expand the boundaries of science across many

DOE mission priorities, which include discovering new energy solutions needed for a sustainable future, rapidly responding to national emergencies and priorities, and extending our knowledge of the natural world through scientific inquiry.

Highly competitive user allocation programs such as Innovative and Novel Computational Impact on Theory and Experiment (INCITE) and ASCR Leadership Computing Challenge (ALCC) were created to ensure the most important and timely computational challenges are chosen for the LCF each year. As a result of these programs, LCF users publish hundreds of research papers every year – many in high impact publications, a competitive edge for U.S. companies, and thousands of students gain critical skills needed across the advanced computing ecosystem. In addition, the technology gains driven by the LCF deployments have fundamentally advanced the use of computing accelerators such as Graphics Processing Units (GPU) to broader societal benefit. Associated breakthroughs in AI science and technology at the LCF, and joint research and development (R&D) with vendors, have pushed the boundaries of computing operations per watt.

The U.S. Government has taken aggressive steps forward recently to reassert the strategic necessity of U.S. leadership in advanced computing through new policies and laws. At the same time, the U.S. is experiencing significant changes in the domestic HPC industry. The technology gains driven by the LCF deployments have fundamentally advanced GPU computing globally, with associated breakthroughs in AI and energy efficiency. Leadership resources enable AI applications to be trained with unprecedented speed and precision when coupled with the high quality, curated data generated by SC programs and user facilities through an Integrated Research Infrastructure. Continuing to address these DOE mission challenges requires Leadership Computing resources five to ten times more advanced than Frontier, including the ability to solve more complex problems, such as those with more physics or requirements for higher fidelity.

The OLCF Frontier computer system will reach its end-of-life in the CY 2026-2027 timeframe. The OLCF-6 will deploy advanced computing ecosystems as the successor to Frontier. The fast-growing need for advanced data integration technologies will drive new considerations in enhancements and upgrades to these facilities. Upgrading the data system earlier will ensure data needs are addressed early on and are transitioned smoothly from the previous systems.

ORNL expects to award a new system contract by CY 2024 with performance through CY2033. As with prior HPC systems, it may be necessary to accelerate key NRE (also known as research & development) as part of the ORNL acquisition to advance technology development, improve capabilities, improve application performance, and lower the total cost of ownership of the delivered system.

It is estimated that the total purchase price of the OLCF-6 system is \$500M. This cost is dependent on many variables, including high or low end scenario, technology readiness, competitiveness of U.S. vendors, supply chain volatility, HPC market share, and ability to reuse current infrastructure.

The Allocation of Patent Rights

Any small business or non-profit organization will retain the patent rights to its subject inventions under the Bayh-Dole Act, codified at 35 U.S.C. §§ 200-212. Such subcontracts will contain the standard clause DEAR 952.227-11, *Patent Rights-Retention by the Contractor*.

For non-Bayh-Dole subcontractors, the Government retains title to subcontractor's subject inventions as set forth in the clause DEAR 952.227-13, *Patent Rights-Acquisition by the Government*. However, a subcontractor that agrees to cost share by an amount of **at least 40% of the total cost of the subcontract shall qualify for this Class Waiver** where DOE agrees to waive in advance, patent

rights to the subcontractor such that it may elect its subject inventions. This patent rights waiver is subject to a retained government-use license, march-in rights, reporting requirements, DOE approval of assignments, 35 U.S.C. § 204, a U.S. Competitiveness provision (paragraph (t)), and other terms set forth in the *Patent Rights-- Waiver* clause in Appendix A, which will replace the 952.227-13 clause in all qualified subcontracts.

The Allocation of Rights in Computer Software

The Bayh-Dole Act only applies to the allocation of patent rights. However, many subcontractors prefer to have advance rights in data developed under their subcontracts, specifically rights in computer software. Therefore, this Class Waiver also allows a domestic subcontractor (small business, non-profit or for-profit organization) to assert copyright in computer software without the Contracting Officer's prior approval. Under the subject award, DOE agrees, in advance, to authorize the subcontractor to assert copyright, without the Contracting Officer's prior approval, in software produced under the subcontract by its employees. The right to assert copyright in OLCF-6 software is subject to a limited government-use license to allow the subcontractor sufficient opportunity to commercialize the software.

Via the limited government-use license, the Government reserves, for itself and others acting on its behalf, a paid-up nonexclusive, irrevocable worldwide license in the computer software to reproduce, prepare derivative works, and perform publicly and display publicly (but not to distribute to the public) by or on behalf of the Government. Furthermore, the limited government-use license in copyrighted software will expand to a broad Government license (which allows the Government to distribute copies to the public) if either the subcontractor abandons efforts to commercialize the software or DOE exercises its march-in rights when, for example, the subcontractor has not taken effective steps to commercialize the software. Separately, the broad Government license will also apply to whatever OLCF-6 software the subcontractor releases under an Open Source Software (OSS) license.

Notwithstanding the above approval to assert copyright in computer software, a subcontractor delivering software under an OLCF-6 subcontract shall comply with the requirements of the subcontract governing copyright and rights in data, including the standard policies and practices regarding submission to DOE's Office of Science and Technical Information (OSTI) via its DOE CODE platform. ORNL's treatment of delivered software shall be governed by the applicable terms of its prime contract. Therefore, ORNL should consult with ASCR (and with DOE Patent Counsel's concurrence) to determine which software developed under specific subcontracts should be (a) delivered to ORNL and/or (b) required by the subcontract to be distributed under an OSS license.

DOE believes that the above approach for allocating rights in OLCF-6 computer software is warranted in order to stimulate the development of end products for future purchase. The proposed subcontract language for these data rights is also attached in Appendix A.

Foreign Subcontracts

The provisions of this Class Waiver do not automatically apply to any foreign-owned or foreign-controlled subcontractors at any tier. However, ORNL should consult with ASCR to determine whether DOE should grant a foreign subcontractor this waiver's disposition of rights or require the foreign subcontractor to submit a separate waiver petition to be approved by DOE's Assistant General Counsel for Technology Transfer and Intellectual Property.

Conclusion

This Class Waiver and the terms of the intellectual property clauses included within the subject subcontracts are meant to cover only the scope of the work under the OLCF-6 procurements for ORNL and shall not serve as precedent for any follow-on work to be negotiated separately with the selected subcontractors. This Class Waiver shall apply to domestic second-tier subcontracts that a first-tier subcontractor issues but shall not apply to foreign-owned or foreign-controlled subcontractors except as provided above.

DOE Patent Counsel will qualify each subcontractor upon written certification by ORNL that this Class Waiver is applicable. Such certification will include verification of the minimum percentage cost share by the subcontractor, a determination that the subcontractor is a U.S. company, a review of the subcontractor's foreign ownership and control, and verification of the acceptance of the terms and conditions of the subcontract.

If any company does not qualify for this Class Waiver or is not satisfied with the terms and conditions of the subcontract necessary to qualify for this Waiver, then that company may separately petition DOE for its own Advance Waiver.

For the foregoing reasons, and in view of the objectives and considerations set forth in 10 CFR Part 784, it is recommended that the requested waiver be granted for domestic first-tier and second-tier subcontracts issued under the OLCF-6 procurement.

Emily G. Schneider
Deputy Chief Counsel for Intellectual Property
DOE Oak Ridge Office of Chief Counsel
GC-South

Based upon the foregoing Statement of Considerations, it is determined that the interests of the United States and the general public will best be served by a waiver of the United States and foreign patent rights, and, therefore, the waiver is granted. This waiver shall not affect any waiver previously granted.

CONCURRENCE:

APPROVAL:

Ceren Susut
Associate Director
Office of Advanced Scientific Computing
Research
Office of Science, DOE

Brian Lally
Assistant General Counsel for Technology
Transfer and Intellectual Property
DOE Office of General Counsel

Date: _____

Date: _____