STATEMENT OF CONSIDERATIONS

CLASS WAIVER FOR U.S. INDUSTRIAL USERS UNDER ADVANCED SCIENTIFIC COMPUTING RESEARCH (ASCR) LEADERSHIP COMPUTING CHALLENGE (ALCC) UNDER DOE PRIME CONTRACTS DE-AC05-00OR22725 WITH UT-BATTELLE, LLC; DE-AC02-06CH11357 WITH UCHICAGO ARGONNE, LLC; AND DE-AC02-05CH11231 WITH THE REGENTS OF THE UNIVERSITY OF CALIFORNIA; W(C)2014-005 [ORO-815]

Under the Office of Science of the U.S. Department of Energy's (DOE) Advanced Scientific Computing Research (ASCR) Leadership Computing Challenge (ALCC), DOE allocates computing time for projects having an emphasis of high-risk, high-payoff simulations in areas directly related to the DOE mission and which broaden the community of researchers capable of using leadership computing resources.

Since FY 2010, the ALCC Program is open to scientists from the research community, industry, academia, and the DOE national laboratories and allocates up to 30% of the computational resources at ASCR's supercomputing facilities. ASCR supercomputing facilities include the Oak Ridge Leadership Computing Facility (OLCF) at the Oak Ridge National Laboratory (ORNL), the Argonne Leadership Computing Facility (ALCF) at Argonne National Laboratory (ANL) and the National Energy Research Scientific Computing Center (NERSC) at Lawrence Berkeley National Laboratory (LBNL). These resources represent some of the world's fastest and most powerful supercomputers.

ALCC is one of several allocation programs for ASCR supercomputing facilities and supports DOE's efforts to further mission science and broaden community access to leadership computing facilities. To fulfill this objective, ALCC supports a wide range of project allocation sizes and allocates time across all three ASCR supercomputing facilities. In 2014, 43 ALCC awards were granted, totaling over 3 billion processor hours with project sizes ranging from 6-350 million process hours. The scopes of work for these awards included energy efficiency, computer science, climate modeling, material science, bioenergy, and basic research. Another such allocation program, the Innovative and Novel Computational Impact on Theory and Experiment (INCITE) Program, aims to accelerate scientific discoveries and technological innovations by awarding, on a competitive basis, time on supercomputers to researchers with large-scale, computationally intensive projects that address "grand challenges" in science and engineering.

DOE continues to strive to make its supercomputing facilities more accessible to industry users. The effort is due in part to two reports (2005 and 2008) from the Council on Competitiveness, as well as in response to Congressional direction to show efforts to increase interaction with industry.[1] Under the ALCC Program, industry participants are encouraged to submit proposals in response to the ASCR "Call for Proposals" and allocations of time are primarily made one time per year. Like INCITE, submitted applications are subjected to peer review and evaluated according to criteria from 10 C.F.R. Part 605. However, ALCC differs from INCITE in that computational readiness is not a review criterion. This factor encourages first-time users to apply and benefit from the substantial support from user facility staff in preparing and running codes.

Many of the ALCC awardees are small and medium businesses which have a need for intellectual property protections, but often face challenges because of limited research and development budgets in affording the price associated with full cost recovery as is required for Proprietary User Agreements described below. Accordingly, the intent of this class waiver is to simplify access to the ASCR facilities by providing a disposition of rights tailored to certain prospective users' needs.

PROPRIETARY AND NON-PROPRIETARY CLASS WAIVERS

Proprietary and Non-proprietary User Agreements do not take the form of a research contract, cooperative agreement, or grant as these terms are used in the Federal Grant and Cooperative Agreements Act of 1977 (31 U.S.C. §§ 6303-6305) and implementing guidance by OMB and OFPP. Therefore, the requirements of DOE's regulations covering contracts, cooperative agreements and grants are not applicable. These agreements do not fall within the definition of "funding agreement" of 35 U.S.C. § 200, *et seq.* (commonly referred to as the Bayh-Dole Act), and the patent policy set forth therein as applicable to small businesses and nonprofit organizations does not apply. For the same reason, the Presidential Memorandum on Government Patent Policy of February 18, 1983, and Executive Order No. 12591 of April 10, 1987, which made the policies of Bayh-Dole applicable to all other organizations to the extent permitted by law, do not apply. Although not falling within the normal concept of R&D acquisition or assistance for the User, these agreements nevertheless fall within the broad definition of "...contract, grant, agreement, understanding, or other arrangement, which includes research..." of Section 9 of DOE's Federal Nonnuclear Energy Research and Development Act of 1974 (Nonnuclear Act), and the concept of "...any contract, subcontract, or

[1] U.S Senate. *Committee on Appropriations, Energy and Water Appropriations Bill Report* (to accompany S. 1245) (S. Report 113-47), June 27, 2013.

arrangement entered into with ...(DOE) ..., regardless of whether the contract, subcontract or arrangement involved the expenditure of funds by the ... [DOE] ..." of Section 152 of the Atomic Energy Act of 1954, as amended (Atomic Energy Act). As a result of this broad statutory language, agreements that fall outside of normal R&D acquisition and assistance policies nevertheless fall within DOE's title-taking patent policy legislation.

While collaborative uses of the Designated Non-proprietary User Facilities could be covered under the statutory authority for Cooperative Research and Development Agreements (CRADAs) in 15 U.S.C. § 3710a., that authority does not exclude other contractual arrangements for collaborative research. Both before and after the enactment of the CRADA law, DOE authorized other types of agreements that covered work that also could have been performed under CRADAs. These include Proprietary and Non-proprietary User Facility Agreements and the Deployment User Facility Agreement.

Under the Proprietary Class Waiver W(C)2008-005 for Proprietary Users of designated user facilities (limited to use of laboratory equipment by the user), users fully fund their own experiments and own all of the resulting inventions and data, with no Government license or march-in rights in the inventions, and no obligations to publicly disclose the resulting data, except that the user must provide DOE and the Laboratory Contractor a non-proprietary report describing the work performed. The Proprietary User class waiver was intended to also be available to users who fully fund the work they perform at supercomputer user facilities, at the discretion of the participating supercomputer user facilities, where no collaboration with the Laboratory Scientists was contemplated.

Where full cost recovery was not intended, the Non-proprietary Class Waiver W(C)2008-003 (which permits collaborative work with Laboratory researchers) applies to inventions and data, and this waiver requires, as a matter of policy, the Government license, standard march-in rights, U.S. Preference, and unlimited rights for the Government in data produced under the user agreement, as well as the right to ensure that the results of the research can be published.

SPECIAL CLASS WAIVERS FOR DOE SUPERCOMPUTING FACILITIES

Several exceptions to the standard class patent waivers described above have been implemented with respect to the supercomputing facilities. As mentioned earlier, and based on the success of more narrow INCITE class waivers granted in the past, DOE expanded the scope of the INCITE Program and granted a class patent waiver in 2007 for all industrial users selected under INCITE solicitations for inventions of the industrial users conceived or first actually reduced to practice in the course of or under the user agreement for use of the

supercomputing facility under the INCITE Program.[2] This waiver allowed industrial users to do proprietary work without full cost recovery so long as a meaningful list of research results and data was released to the public. The waiver also eliminated the requirement of a Government license, U.S. Preference and march-in rights. This class waiver promoted the commercial utilization of subject inventions and made the benefits of supercomputing facilities widely available to the public in the shortest practicable time. The INCITE class patent waiver is not limited to any one DOE supercomputing facility.

In 2009, UT-Battelle requested and was granted a class patent waiver for industrial users of the OLCF receiving allocations of computing time under the OLCF Directors' Discretionary (DD) Program under what was formerly referred to as the Industrial Partnerships Program (IPP). Similar to the INCITE waiver, this class waiver allowed industrial users to perform non-collaborative proprietary research without full cost recovery. The original waiver was limited to a one-year pilot program for a maximum of three projects, with a review of the program during the annual operational assessment. In 2011, due to the success of the initial DD pilot program and continued interest from industry partners, SC extended the DD class waiver for an unlimited duration and unlimited qualified industrial users, subject to available computing time. As with INCITE, subject inventions made by DD participants are owned by the user with no Government license, U.S. Preference, or march-in rights. However, UT-Battelle and the user are required to agree on a meaningful list of research results and data generated during the project which will be publicly released. It should be noted that the DD class waiver is presently only applicable to industrial users under allocations from the DD Program at ORNL. Originally granted in 2009, application of the waiver has expanded from two projects in the first year to nine projects in FY 2014. A comparison of the present class waiver with the aforementioned types of class waivers applicable to DOE supercomputing facilities is attached as Appendix A.

SCOPE OF PRESENT CLASS WAIVER

U.S. Industrial Users

Accordingly, in view of the desire to facilitate access and attract industry users to DOE's supercomputing facilities, especially for high-risk, high-payoff simulations in areas directly related to the DOE energy mission, and to ensure that taxpayer investment in the supercomputing facilities provides benefit to U.S. economic competitiveness, the present class waiver will apply *primarily to U.S. Industrial Users*[3] selected under the ALCC Program.

---

[2] DOE Class Waivers W(C)05-004; W(C)06-002; and W(C)06-003.

[3] "U.S. Industrial User" as used herein is defined as a firm incorporated in the United States (or an unincorporated U.S. firm with its principal place of business in the United States) that is controlled by U.S. citizens or by another U.S. entity. An entity is not a U.S. entity if control is exercised or exercisable by a foreign national, foreign

More specifically, the class waiver will apply to the inventions of the U.S. Industrial Users conceived or first actually reduced to practice in the course of or under the user agreement of the supercomputing facility under the ALCC Program. This waiver does not cover inventions of the Laboratory Contractor operating the facility, which are governed under the terms of the M&O contract with DOE, nor will it apply when the U.S. Industrial User is operating under an agreement with DOE or another federal agency that requires a different disposition of patent rights.

While the intent of this waiver is to cover U.S. Industrial Users, users not meeting the definition of a U.S. Industrial User (Non-U.S. Industrial Users)[4] may be afforded the benefit of this class waiver under limited circumstances described below.

The waiver will permit U.S. Industrial Users to perform non-collaborative proprietary research at the OLCF, ALCF, and NERSC without full cost recovery. Thus, neither the above proprietary (requiring full cost recovery) nor non-proprietary (not applicable to proprietary research) class waivers apply. Likewise, the class waivers under the INCITE and ORNL DD Programs cannot be used since the ALCC is not part of the INCITE or DD Program. Inventions and data produced under the user agreements will be owned by the U.S. Industrial User with no Government license, U.S. Preference or march-in rights in user inventions. However, the Contractors and the U.S. Industrial Users will be required to agree on a *meaningful list of research results and data generated during the work performed under the user agreement that will be publicly released.* There will be no other obligation to publish any other data produced by the U.S. Industrial User. This is fully consistent with the latest class waiver applicable to the INCITE Program.

---

government, or foreign entity. "Foreign entity" means any branch partnership, group or sub-group, association, estate, trust, corporation or division of a corporation organized under the laws of a foreign state and whose principal place of business is outside the United States. See Memorandum for Heads of Departmental Elements Laboratory Directors, and Field and Site Offices from Secretary of Energy Ernest J. Moniz, subject: *Laboratory Memoranda of Understanding, Work for Others, Cooperative Research and Development Agreements and Agreements for Commercializing Technology with Foreign Partners,* dated November 16, 2014.

[4] "Non-U.S. Industrial User" as used herein is defined as any entity over which control is exercised or exercisable by a foreign national, foreign government, or foreign entity. "Foreign entity" means any branch partnership, group or sub-group, association, estate, trust, corporation or division of a corporation organized under the laws of a foreign state and whose principal place of business is outside the United States. See Memorandum for Heads of Departmental Elements Laboratory Directors, and Field and Site Offices from Secretary of Energy Ernest J. Moniz, subject: *Laboratory Memoranda of Understanding, Work for Others, Cooperative Research and Development Agreements and Agreements for Commercializing Technology with Foreign Partners,* dated November 16, 2014.

The waiver of title to the U.S. Industrial User will be automatic, and granted without a request or petition by the Industrial User, upon a determination from DOE Patent Counsel *and express concurrence from the DOE Headquarters ALCC Program Manager* that:

(1) the work to be performed under the agreement is not covered by another contract or arrangement falling under DOE's statutory patent policy;
(2) the U.S. Industrial User is qualified and selected to have access to the supercomputing facilities, consistent with the ALCC Program and all applicable computer security requirements;
(3) no federal funding is used to fund, in whole or in part, the project either directly from a federal agency or indirectly through a third party recipient of federal funds or falls within the scope of a federally-funded contract or award (excluding an M&O contract for a facility); and
(4) the terms and conditions for the agreement with the U.S. Industrial User comply with this class waiver and any instructions for its implementation as issued by the Assistant General Counsel for Technology Transfer and Intellectual Property (GC-62).

Non-U.S. Industrial Users

Non-U.S. Industrial Users which have been allocated time under the ALCC Program may also qualify for application of this waiver under the above described criteria and *with an express determination from the Associate Director of ASCR* of the following additional requirements:

(5) the work to be performed is not subject to an international agreement with a foreign governmental organization; and
(6) the application of this class waiver to a Non-U.S. Industrial User will benefit the ALCC Program and is in the best interests of the United States and the general public. Factors to be considered by the ALCC Program in making its determination may include, but are not limited to:
    a. whether any resulting design and development will be performed in the United States and whether resulting products will be substantially manufactured in the United States;
    b. whether the Non-U.S. Industrial User has a business unit located in the United States and whether significant economic and technical benefit will flow to the United States as a result of this agreement; and/or
    c. whether the foreign government under which the Non-U.S. Industrial User is incorporated permits United States agencies, organizations, or other persons to enter into similar arrangements in its country.

CONCLUSION

Supercomputing facilities have been established for use in computational intensive large-scale research projects that can make high-impact scientific and industrial advances through the use of a substantial allocation of computer time and data storage to support research in fields not necessarily of primary interest to DOE and were established not only for utilization by DOE, but also by advancing research by offering these unique capabilities to the research efforts of profit and nonprofit entities, as well as other federal agencies. The grant of this waiver, therefore, will not only be consistent with the legislative intent of the Bayh-Dole Act, but will also reflect the guidance provided to DOE in Section 9 of the Federal Nonnuclear Energy Research and Development Act of 1974, as amended (42 U.S.C. § 5908), as implemented by DOE regulations governing the granting of patent waivers, in the 1983 Memorandum on Government Patent Policy, and Executive Order 12591.

DOE encourages the widespread utilization of supercomputing facilities in support of computer intensive research. Thus, providing ownership rights to patentable inventions (without Government rights) made by U.S. Industrial Users would best encourage such utilization. By not requiring full-cost recovery for use of the facilities, this waiver also promotes the commercial utilization of subject inventions and makes the benefit of the supercomputing facilities widely available to the public in the shortest practicable time. Accordingly, this waiver is consistent with the objectives and considerations of DOE's patent waiver regulations.

Accordingly, in view of the statutory objectives to be attained and the factors to be considered under DOE's statutory waiver policy, all of which have been considered, it is recommended that a waiver of U.S. and foreign patent rights to U.S. Industrial Users participating in the ALCC Program under solicitations for FY 2015 and beyond, as described above, will best serve the interests of the United States and the general public. It is, therefore, recommended that the waiver be granted.

[redacted]

Emily G. Schneider
Assistant Chief Counsel for Intellectual Property
and Technology Transfer

3/12/2015

Date

Pursuant to the authority provided in Section 152 of the Atomic Energy Act of 1954, as amended (42 U.S.C. § 2182), Section 9 of the Federal Nonnuclear Energy Research and Development Act of 1974, as amended (42 U.S.C. § 5908), and the implementing regulations promulgated thereunder for waivers of patent rights, it is concluded that it is in the best interests of the United States and the general public to grant a waiver of patent rights to the class described herein. Therefore, it is ordered that a waiver of U.S. and foreign patent rights to the class of inventors described in the foregoing Statement of Considerations is hereby granted. The waiver is limited to inventions which are conceived or first actually reduced to practice in the course of or under an agreement for use of the supercomputing facilities for the ALCC Program, and is subject to all the limitations, terms, and conditions set forth in the foregoing Statement of Considerations. The Assistant General Counsel for Technology Transfer and Intellectual Property shall be responsible for issuing instructions for implementation of this waiver in accordance with DOE regulations for the waiver of patent rights.

CONCURRENCE:

[redacted]

J. Steve Binkley
Associate Director
Advanced Scientific Computing Research
Office of Science (SC-21)

Date

APPROVED:

[redacted]

John T. Lucas
Assistant General Counsel for Technology
Transfer and Intellectual Property (GC-62)

6/15/2015

Date