STATEMENT OF CONSIDERATIONS

ADVANCE CLASS WAIVER OF PATENT RIGHTS FOR TECHNOLOGY DEVELOPED UNDER DOE FUNDING AGREEMENTS RELATING TO DOE'S ENERGY INNOVATION HUBS-FUELS FROM SUNLIGHT; DOE FUNDING OPPORTUNITY ANNOUNCMENT DE-F0A-0000214; W(C)-09-021; CH1532

The Department of Energy Office of Science is providing federal assistance in the form of cooperative agreements, field work authorizations, interagency agreements, or Technology Investment Agreements (TIAs) for a new R&D structure—an Energy Innovation Hub that will foster unique scientific collaboration to rapidly drive energy solutions to their fundamental limits. An Energy Innovation Hub will comprise a highly collaborative team spanning multiple scientific, engineering, economics, and public-policy disciplines. By bringing together top talent across the full spectrum of R&D performers, including universities, private industry, non-profits, and National Laboratories, each Hub is expected to become a world-leading R&D center in its topical area. The Energy Innovation Hubs will take a holistic, systems approach to science and technology and will act as an integrator of basic and applied research and development. The scientific problems to be addressed by the Hub are inherently interdisciplinary: it will require personnel with varied skills and expertise in areas that may include physics, chemistry, matenals science, biology, and engineering, among other possible areas.

The Research Focus for this FOA and Class Waiver is "Fuels from Sunlight". All fuels used today to power vehicles and create electricity, whether from fossil or biomass resources, are ultimately derived from photosynthesis. Although the natural photosynthetic apparatus is a remarkable machine, plants and photosynthetic microbes were not designed to meet human energy needs. The impact of replacing fossil fuels with fuels generated directly by sunlight would be immediate and revolutionary. Three critical issues for the Fuels from Sunlight Hub have been identified as: (1) Understanding and designing catalytic complexes or solids that generate chemical fuel from carbon dioxide and/or water; (2) Integration of all essential elements from light capture to fuel formation into an effective solar fuel generation system; and (3) Pragmatic evaluation of the solar fuel system under development. Detailed information regarding the research needs for the production of fuels from sunlight can be found at http://www.sc.doe.gov/bes/reports/list.htm.

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This advance class waiver shall only apply to a cooperative agreement or subagreement made to for-profit entities or team members who are not subject to the Bayh-Dole Act (P.L. 96-517 as amended) who meet the minimum cost-sharing requirement as set forth below. Intellectual Property terms will be separately negotiated in any awards resulting in a TIA.

Different cost-share requirements have been established depending on the nature of the research to be performed. For a research and development project of a basic, fundamental, or applied nature, the FOA provides that cost sharing is encouraged but not required. For a demonstration and commercial application project, cost sharing of at least 20% of the total allowable costs is required and must come from non-Federal sources unless otherwise allowed by law. Nevertheless, for purposes of this class patent waiver, 20% cost sharing is required by any for-profit entity not subject to Bayh Dole, regardless of the nature of the research. Thus, although a for-profit entity not subject to Bayh Dole, number of the research. Thus, although a for-profit entity not subject to Bayh Dole, number of the research. Thus, although a for-profit entity not subject to Bayh Dole, number of the research. Thus, although a for-profit entity not subject to Bayh Dole, nevertheless be required to cost sharing, to participate in this class waiver, this entity would nevertheless be required to cost share at least 20%.

Although a HUB may be composed of diverse institutions including national laboratories, academia and non-profit research institutes and the private sector, it is the purpose of this class waiver to vest title in new inventions made under this program by a for-profit entity not subject to Bayh-Dole in a fashion enabling them to expediently commercialize the various technologies. The FOA requires the submission of an Intellectual Property Management Plan, which will facilitate licensing, and this class waiver will provide a waiver recipient with sufficient incentive toward that end. Accordingly, DOE will waive the Government's title to subject inventions, other than inventions made by Bayh-Dole participants pursuant to P.L. 96-517, as amended, or National Laboratories, to qualifying for-profit entities not subject to Bayh Dole who are cost sharing at least 20%.

This advance class waiver of the Government's rights in inventions is subject to the standard patent waiver clause (attached). As provided in the FOA, a special data clause will be incorporated in which DOE has appropriate rights in data to assure long terms access to generated data to assure dissemination. The terms of the advance patent waiver include the usual Government license, march-in rights, and preference for U.S. industry provisions comparable to those set out in 35 U.S.C. §§ 202-204. This

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advance patent waiver also includes a U.S. Competitiveness clause which requires that products embodying any waived invention or produced through the use of any waived invention be manufactured substantially in the United States unless the participant can show to the satisfaction of DOE that it is not commercially feasible to do so. In the event DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor further agrees to make this condition binding on any assignee or licensee or any entity otherwise acquiring rights to any waived invention, including subsequent assignees or licensees. Should the Contractor or other such entity receiving rights in any waived invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by DOE. Should the contractor be unable to meet this U.S. Competitiveness requirement, an alternate U.S. Competitiveness clause can be considered and approved, for good cause shown in writing to the local DOE Patent Counsel, with consultation and concurrence from the Program Office.

The grant of this class waiver is not expected to result in adverse effects on competition or market concentration. Rather the waiver should enhance competition and growth of a new energy industry in the United States. DOE has the right to require reports of the utilization or the efforts at utilization that are being made for the waived inventions.

As stated above, this advance class waiver shall apply to a cooperative agreement or subagreement made to a for-profit entityt not subject to Bayh-Dole who meets the minimum cost-sharing requirement as set forth above and who have provided written notice to DOE of their acceptance of the terms and conditions of this class waiver. The waiver will remain in effect as long as such cost sharing is maintained, in aggregate, over the term of the agreement. No separate waiver petition is required to be submitted. Should a contractor receiving an award under this FOA not be eligible for this Class Waiver, the contractor has the right to petition for an advance patent waiver or an identified patent waiver on its own behalf pursuant to 10 C.F.R. 784.

Considering the foregoing, and in view of the statutory objectives to be obtained and the factors to be considered under DOE's waiver regulation, 10 C.F.R. 784, all of which have been considered, it has been determined that this class waiver as set forth

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above will best serve the interest of the United States and the general public. It is recommended that the waiver be granted.

Mark P. Dvorscak Deputy Chief Counsel Intellectual Property Law Division

Date: 12,2010

Based on the foregoing Statement of Considerations, it is determined that the United States and the general public will best be served by a waiver of rights of the scope described above, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of this agreement, where through such modification or extension, the purpose, scope, or cost of the agreement is substantially altered.

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CONCURRENCE:

Harriet Kung, SC-22 Associate Director Office of Basic Energy Sciences Office of Science

51 4/20/0 Date:

APPROVAL:

Pdul A. Gottlieb

Assistant General Counsel for Technology Transfer and Intellectual Property

Date: