

STATEMENT OF CONSIDERATIONS

REQUEST BY ALSTOM POWER, INC. FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER DOE COOPERATIVE AGREEMENT NO. DE-FC26-07NT43095, W(A)-08-044, CH-1457

The Petitioner, Alstom Power, Inc., was awarded this cooperative agreement for the performance of work entitled, "Development of Computational Approaches for Simulation and Advanced Controls for Hybrid Combustion-Gasification Chemical Looping." The purpose of the cooperative agreement is to develop computational process models and a process control dynamic simulator suitable for use in investigation, development, and prototype implementation of advanced sensing and control systems for the chemical looping power plant. The overall project goal is to develop advanced multivariable optimizing controls integrated early into the process development cycle to ensure a plant level design that is controllable and reliable. This waiver is only for inventions of Alstom made under this cooperative agreement.

The total estimated cost of the cooperative agreement is \$1,593,378 with Alstom responsible for \$240,242, or 20% cost-share. It is noted that 5% (\$78,433) of Alstom's cost share is being provided by its subcontractor University of Illinois-Chicago (UCIC) (This waiver does not apply to UCIC since it is an institution eligible to retain title to inventions pursuant to P.L. 96-517, as amended). DOE is thus providing the remaining \$1,272,703 or 80%. The period of performance is twenty-seven months from July 12, 2007 to September 30, 2009.

In its response to question 5 of the attached waiver petition, Alstom has described its technical competence in the field of in power generation. It designs, builds, and services technologically advanced products and systems for the world's energy and transport infrastructure. Alstom Power Inc. is one of the world's leading power generation equipment suppliers, providing a full scope of supply including gas turbines, steam turbines, boilers, pollution control, hydropower, and related equipment and services. As a boiler manufacturer and full scope power generation equipment supplier, its ultimate goal for this program is the commercialization and utilization of the resultant chemical looping based power technology. Alstom has provided a list of recent patents and patent applications on chemical looping technology in Table 1 in response to question 5 of the petition. Alstom's response demonstrates its technical competency in the field of power generation.

In its response to questions 9 and 10 of the attached waiver petition, Alstom states there are several companies, including Alstom, which have extensive U.S. marketing organizations as well as extensive engineering and research and development organizations. No one of these companies has a dominant position. Furthermore, these U.S. companies continue to seek improvement of advanced coal power systems. Consequently, the primary competition in the boiler market is driven by the continuous creation of advances in coal power technology, including chemical looping systems, outside of the subject DOE Project. Alstom further states that granting this waiver will sustain the existing competitive environment which is characterized by a group of non-dominating companies competing against each other on the basis of technological advances as well as cost reductions in advanced coal power. If, by virtue of this waiver, Alstom is able to strengthen its proprietary position in chemical looping technologies, the marketplace will not permit Alstom to acquire a preferred or dominant market position, as Alstom's improved coal power technology will still need to compete with the advances in coal power technology made by its competitors. Therefore grant of the waiver will have a positive effect on competition and market

concentration.

The subject contract will be modified to add the Patent Rights--Waiver clause in conformance with 10 CFR 784.12, wherein Alstom has agreed to the provisions of 35 U.S.C §§ 202, 203, and 204. This waiver clause will also include a paragraph entitled U.S. Competitiveness, in which Alstom agrees to substantial U.S. manufacture of subject inventions (attached hereto). Additionally, Alstom agrees not to transfer subject inventions to any other entity unless that other entity agrees to these same requirements. Considering the foregoing, it is believed that granting the waiver will provide the Petitioner with the necessary incentive to invest resources in the commercialization of the results of the agreement in a fashion which will make the agreement's benefits available to the public in the shortest practicable time. In addition, it would appear that grant of the above requested waiver would not result in an adverse effect on competition nor result in excessive market concentration. Therefore, in view of the objectives and considerations set forth in 10 CFR 784, all of which have been considered, it is recommended that the requested waiver, as set forth above, be granted.


Mark P. Dvorscak
Deputy Chief Counsel
Office of Intellectual Property Law

Date Jan 22, 2009

Based on the foregoing Statement of Considerations and the representations in the attached waiver petition, 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.

CONCURRENCE:


Regis Conrad
Office of Clean Energy Systems
Office of Fossil Energy
FE-22

Date Jan 30, 2009

APPROVAL:


Paul A. Gottlieb
Assistant General Counsel for Technology
Transfer and Intellectual Property, GC-62

Date 2-4-09

t) **U. S. COMPETITIVENESS** The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the 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 agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the 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 the DOE.