

STATEMENT OF CONSIDERATIONS

REQUEST BY ADVANCED TECHNOLOGY MATERIALS INC FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER DOE COOPERATIVE AGREEMENT NO. DE-NT0005578, W(A)-2012-031; CH-1666

The Petitioner, Advanced Technology Materials, Inc. (ATMI) was awarded a subcontract under the subject cooperative agreement between the Department of Energy and SRI International (SRI) for the performance of work entitled, "Development of Novel Carbon Sorbents for CO₂ Capture". The objective of the program is to develop an innovative, low cost, and low energy consuming carbon dioxide (CO₂) capture technology based on adsorption on a high-capacity and low-cost carbon sorbent. The specific objectives are to validate the performance of this concept on a bench-scale system; perform parametric experiments to determine the optimum operating conditions; and, evaluate the technical and economic viability of the technology. The information obtained from this project will be used to design a 0.25 MW or larger capacity pilot unit that will treat a slipstream from an operating coal-fired power plant in a future phase. Under its subcontract, ATMI will prepare and supply advanced carbon sorbents to SRI for testing in a simulated CO₂ flue gas capture process. SRI is a nonprofit organization, having the right to elect title to its inventions pursuant to the "Patent Rights-Small Business Firms and Nonprofit Organizations" clause of its contract. This waiver is for inventions of ATMI only.

The total cost of the project is \$2,249,957 with SRI providing 20% cost-share or \$450,000 (which is the value of the subcontract to ATMI). DOE is providing the remaining 80% or \$1,799,957. In response to question 3 of the waiver petition, ATMI explains that it is funding 95% of its subcontract value. The remaining 5% cost share is provided by SRI. The period of performance is from October 1, 2008 through September 30, 2012¹.

In its response to question 5 of the attached waiver petition, ATMI has described its technical competence in the field of engineered carbon materials. It has built a significant business (\$50 to 100MM per year) in specialty gases supplied in adsorbent (e.g. carbon) filled cylinders. The company's prior experience and know-how are key assets for the commercialization of specialty sorbents for CO₂ capture. ATMI has attached a list of four related issued patents and one pending patent application to substantiate these claims. ATMI's response demonstrates its technical competency in the field of engineered carbon materials.

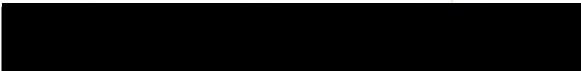
In its response to question 10 of the attached waiver petition, ATMI states its technology will provide a viable cost-effective option for segments of the market without any options today. ATMI also states that there are other competitive technologies, specifically amine-based absorption, which are mature and have significant advantages associated with their incumbency. There is no evidence showing that granting this waiver will have an adverse effect on competition.

The subject cooperative agreement will be modified to add the Patent Rights--Waiver clause in conformance with 10 CFR 784.12, wherein ATMI 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 ATMI agrees to substantial U. S. manufacture of subject inventions (attached hereto). ATMI agrees to submit annual reports on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by ATMI and any of its licensee or

¹ DOE executed a no-cost extension to bring the original term end date from 09/30/2011 to 09/30/2012. The end date was then modified again to 11/30/2012.

assignees. ATMI also agrees to submit copies of any issued patents based on subject inventions. Additionally, ATMI 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 cooperative agreement in a fashion which will make the cooperative 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.



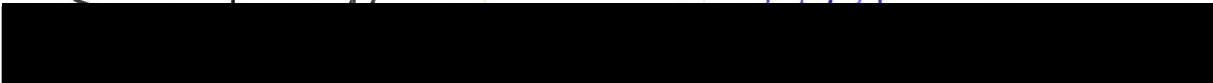
Mark P. Dvorscak
Deputy Chief Counsel
Intellectual Property Law Division, CH

Date: September 21, 2012
Amended: March 22, 2013

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 subcontract, where through such modification or extension, the purpose, scope, or cost of the subcontract is substantially altered.

CONCURRENCE:

APPROVAL:



Darren J. Mpirot
Director for Office of Clean Energy Systems,
FE-22

John J. Lucas
Assistant General Counsel for
Technology Transfer & Intellectual Property,
GC-62

Date: 4/23/13

Date: 4/26/13

(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.