

STATEMENT OF CONSIDERATIONS

REQUEST BY ADVANCED TECHNOLOGY MATERIALS, INC. (ATMI) FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN RIGHTS TO INVENTIONS MADE UNDER COOPERATIVE AGREEMENT NUMBER DE-FC04-02AL67616, DOE WAIVER NO. W(A) 02-054.

The Petitioner, ATMI, has requested a waiver of all domestic and foreign patent rights to inventions that may be conceived or first actually reduced to practice in the course of ATMI's subcontract work for United Technologies Corporation Fuel Cells (UTCFC) under Cooperative Agreement Number DE-FC04-02AL67616 entitled "The Development of Sensors for Automotive Fuel Cell Systems" with the U.S. Department of Energy (DOE).

The work to be done under the cooperative agreement will be the development of gas sensors for use in automotive fuel cell systems. The work to be done under the subcontract will be the design and development of a novel micro-machined hydrogen sensor based on proprietary, patented ATMI technology, and to adapt such a sensor to a fuel cell environment. Such a sensor would be important in the optimization of efficiency and safety in fuel cell vehicles. As such, successful research and development under this agreement will lead to broader use of fuel cell technologies, which will result in better air quality and lowered dependence on unstable overseas oil supplies.

The cooperative agreement covers a period from April 1, 2002 through March 31, 2005 at a total estimated cost to DOE of \$2,955,153. ATMI's subcontract covers a period from November 1, 2002 through March 31, 2005. UTCFC, the prime contractor, will provide an estimated \$738,789 as a cost share (25%) over the life of this agreement. ATMI's subcontract with UTCFC is for a total cost of \$613,709, with ATMI's providing \$67,809 as a cost share (11%). However, UTCFC, the prime contractor, has agreed to allow its cost share to be considered as part of ATMI's contribution for determining whether to approve this request. UTCFC affirmatively approves and consents to ATMI's waiver request. With UTCFC's contribution, the cost share greatly exceeds to normal 20% threshold for approval. UTCFC's agreement is attached. The government contribution will be made through Budget & Reporting Code EE0502 sponsored by the Office of Advanced Automotive Technologies.

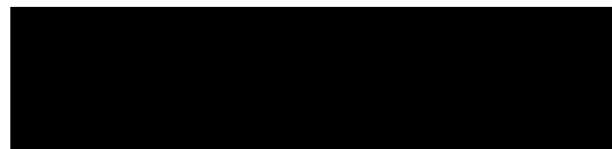
ATMI is a Danbury, CT-based, U.S. corporation with 16 years of experience in advanced semiconductor research and development. ATMI owns in excess of 14 patents in the field of gas sensing technology. ATMI has annual, commercial sales of gas sensor systems between \$14M and \$20M. ATMI has also invested between \$3.6M - \$5.5M in research and development and technology acquisition in the field of gas sensing. There exists several other global companies doing extensive research and development in the field of gas sensing systems. ATMI's technology, while proprietary, is one only of many gas-sensing technologies commercially available on the global market. As such, based on the dynamic nature of the technology itself, as well as the research and development

being done in this field worldwide, it is not foreseen that the grant of this waiver would decrease competition, cause undesirable market concentration, nor place ATMI in a dominant market position.

ATMI has agreed to abide by 35 U.S.C. §§ 202, 203 and 204, as well as the provisions of the Standard Patent Rights clause for an Advance Waiver. Additionally, ATMI has agreed to the provisions of the attached U.S. Competitiveness Clause, which requires Petitioner to substantially manufacture any products embodying or produced through any waived invention in the United States, unless Petitioner can convince DOE it is not commercially feasible to do so. Petitioner agrees to make this condition binding on any assignee or licensee. ATMI will abide by the Export Control laws and will require its licensees, if any, to do the same. ATMI will expend such sums as may be required to maintain the necessary patent protection and provide incentive for commercial development of the invention. Additionally, ATMI has affirmatively agreed to the background data rights clause found in 48 CFR 952.227-14, Alternate VI (February 1998) (attached).

Considering Petitioner's status as a leader in the development and production of gas sensor system, it is concluded that the grant of the requested waiver is most likely to achieve commercialization success and actual implementation of the fuel cell technology which is the goal of the overall cooperative agreement on both a national and global scale.

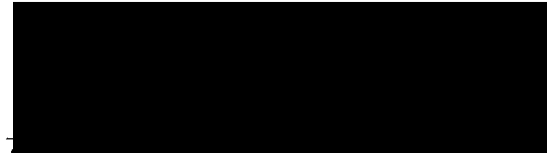
As such, upon evaluation of the Waiver Petition in view of the objectives and considerations set forth in 10 CFR 784.4, all of which have been considered, it is recommended that the requested waiver be granted.



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Based on the foregoing Statement of Considerations and the representations of the attached Waiver Petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope described above and, therefore, the waiver is granted. This waiver shall not apply to a modification or extension of the cooperative agreement where, through such modification or extension, the purpose, scope or DOE cost of the cooperative agreement have been substantially altered.

CONCURRENCE:



Steven G. Chaik
Program Manager, Office of Hydrogen
& Fuel Cells Infrastructure
Technologies Program, EE-2H

Date: 7/11/03

APPROVAL:



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

Date: 7-15-03