

## STATEMENT OF CONSIDERATIONS

REQUEST BY GENERAL ELECTRIC GLOBAL RESEARCH (GEGR) FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN RIGHTS TO INVENTIONS MADE UNDER COOPERATIVE AGREEMENT NUMBER DE-FC04-01AL67614, DOE WAIVER NO. W(A) 02-016.

The Petitioner, GEGR, formerly known as GE Energy and Environmental Research Corporation, has requested a waiver of all domestic and foreign patent rights to inventions that GEGR may conceive or first actually reduce to practice in the course of GEGR's work under Cooperative Agreement Number DE-FC04-01AL67614 entitled "Autothermal Cyclic Reforming Based Hydrogen Refueling System" with the U.S. Department of Energy (DOE). This waiver will not cover the inventions of subcontractors to GEGR.

The work to be done will be the design, development and manufacture of a reliable autothermal cyclic reformer (ACR)-based hydrogen fueling system. This work is designed to make hydrogen-fueling cost efficient (at an estimated \$2.50/kg assuming a natural gas cost of \$3.00/MMBtu). Successful research and development under this agreement will lead to broader use of consumer 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 October 1, 2001 through September 30, 2005 at a total cost to DOE of \$2.65M. DOE funding to be provided as follows: FY01 -- \$120,000; FY02 -- \$405,000; FY03 -- \$859,500; and FY04 -- \$932,000; and FY05 -- \$335,000. GEGR will provide approximately \$940,000 as a cost share (35.3%) over the life of this agreement. The government contribution will be made through Budget & Reporting Code EB4200 sponsored by the Office of Hydrogen, Fuel Cells and Infrastructure Technologies. To date, GEGR has already expended over \$2M in the development of this ACR technology.

GEGR is a wholly-owned subsidiary of the General Electric Company (GE). GE is a U.S.-based multinational corporation with a worldwide corporate presence. GEGR is a global leader in advanced technology research and has three existing patents in ACR technologies. GEGR, through its parent company GE, has an extremely well established global marketing base, thus allowing for swift, thorough and worldwide commercialization and implementation of any improved fuel cell technology that would be developed. 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 GEGR, nor GE, in a dominant market position. GEGR is utilizing three subcontractors under this agreement. One of the subcontractors is UK-based BP (formerly known as British Petroleum, Amoco and Arco), which is one of the world's largest petroleum providers and owner/operator of several hydrogen generation plants. Another subcontractor is Danbury, Connecticut-based Praxair, a multinational

corporation with about 60 years of experience in research and development in gas separation technology. Praxair currently holds almost 3,000 patents in the field of air and gas separation technologies. The final subcontractor is Littleton, Colorado-based Hydrogen Components, Inc., which is a well-established manufacturer, designer and assembler of hydrogen-related subsystems.

GEGR 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, GEGR 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. GEGR will abide by the Export Control laws and will require its licensees, if any, to do the same. GEGR, through its parent company GE, will expend such sums as may be required to maintain the necessary patent protection and provide incentive for commercial development of the invention. Additionally, GEGR 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 world leader in research and development of advanced technologies, it is concluded that the grant of the requested waiver is most likely to achieve commercialization success and actual implementation of advanced hydrogen-fueling systems, and thus advanced fuel cell usage, 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:



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Date: 12/18/03



APPROVAL:

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Date: 12-22-03

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