

## STATEMENT OF CONSIDERATIONS

### **REQUEST BY ENERGY CONVERSION DEVICES, INC. FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER DOE COOPERATIVE AGREEMENT NO. DE-FC26-06NT43026; W(A)-06-034; CH-1392**

The Petitioner, Energy Conversion Devices, Inc. (ECD) was awarded this cooperative agreement for the performance of work entitled, "Development of Advanced Small Hydrogen Internal Combustion Engines (ICEs)." The purpose of the cooperative agreement is to develop advanced, low cost conversions of small (<25 hp) gasoline internal combustion engines (ICEs) to run on hydrogen fuel while maintaining the performance and durability equivalent to, or superior to, the unmodified gasoline engine. The advanced hydrogen engines developed in this program will be demonstrated by integration into a three wheeler and a stationary power generation (gen-set) application. The vehicle and the generator will be fueled with on-board hydrogen carried in proprietary Ovonic solid state hydrogen storage systems. The waiver is directed only to inventions of ECD made under this cooperative agreement.

The total estimated cost of the cooperative agreement is \$1,714,286. The DOE share is \$1,200,000 or 70%. ECD's cost share is \$514,286 or 30%. The period of performance is from September 2006 through September 2008.

In its response to question 5 of the attached waiver petition, ECD has described its technical competence in the field of vehicle hydrogen storage and delivery. ECD has pioneered the conversion of small gasoline engines as part of programs that successfully demonstrated the use of hydrogen as a fuel for light two- and three-wheeled vehicles and hydrogen fueled generators. Under a USAID cost-shared project (DE-FC26-04NT42060, Advanced Patent Waiver W(A)-04-026), ECD developed and demonstrated hydrogen fueled three wheeled vehicles, and has two patents covering this technology. ECD has an extensive portfolio of patents in these fields, and has attached a list of representative United States patents covering hydrogen storage and delivery technology. As mentioned in response to question 7, ECD invested, with its former joint venture partner Texaco Ovonic Hydrogen Systems, LLC (TOHS) in solid state hydrogen storage technology. ECD is not collaborating with TOHS on this project. ECD's response demonstrates its technical competency in the field of vehicle hydrogen storage and delivery.

In its response to question 10 of the attached waiver petition, ECD states that commercialization of the proposed technologies will stimulate healthy competition among various clean fuel technologies and contribute to economic growth. Other clean technologies are being commercialized, such as fuel cells, clean diesel fuel, pure electric vehicles and hybrid electric vehicles. Because the industry has been developing the technology for many years, fundamental blocking patents are not likely to be granted. ECD hopes that through the grant of the waiver, it may carve out a proprietary niche for ECD that it can leverage in its commercialization efforts. Grant of the waiver should not inhibit competition within the hydrogen ICE industry, but should have a positive effect on competition and market concentration.

The subject cooperative agreement will be modified to add the Patent Rights--Waiver clause in conformance with 10 CFR 784.12, wherein ECD 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, attached hereto, in which ECD agrees to substantial U. S. manufacture of subject inventions (attached hereto). Additionally, ECD 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  
Intellectual Property Law Division

Date:

May 1 2007

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:

  
C. Lowell Miller  
Director, Office of Sequestration, Hydrogen and Clean Coal Fuels  
Office of Sequestration, Hydrogen and Clean Coal Fuels  
Office of Fossil Energy  
FE-32

Date:

May 10, 2007

APPROVAL:

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

Date:

5-30-07

(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.