STATEMENT OF CONSIDERATIONS

REQUEST BY UNITED TECHNOLOGIES CORPORATION FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER DOE COOPERATIVE AGREEMENT NO. DE-FC26-03NT41953; W(A)-04-014, CH-1184

The Petitioner, United Technologies Corporation (UTC), was awarded this cooperative agreement for the performance of work entitled, "Development of a High Latent Effectiveness Energy Recovery Ventilator with Integration into Rooftop Package Equipment." The program will address the key issues of reliability, performance, and cost that have been barriers to entry of heat pump water heaters into the North American market. The risk reduction and technology/feasibility demonstration efforts conducted during this agreement will erode the above barriers and accelerate the commercialization and public acceptance of such products. The objectives will be achieved through a coordinated effort of modeling and simulation combined with laboratory testing and culminating with prototype development and field trial testing under a wide variety of conditions. Further details of the project objectives are described in response to question 2 of the waiver petition.

The total estimated cost of the cooperative agreement is $1,871,323 with the DOE share being $1,496,860 or 80%, while the remaining cost share of 20%, or $374,463, will be provided by UTC. The period of performance is from October 2003 through March 2006.

In its response to questions 5 and 6 of the attached waiver petition, UTC has described its technical competence in the field of CO2 heating and air conditioning components. UTC is a multi-national corporation with recognized expertise and high quality products in many markets. Included in these are efficient, reliable and affordable heating and air conditioning components and systems produced by Carrier, a UTC owned company. Carrier is the largest air conditioning company in the world, and has product lines covering hydronic reversible heat pumps for space conditioning applications. UTC states that it has a strong position regarding patents related to the technologies that are the subject of this agreement, as well as for the commercial products that use them. UTC has attached a partial list of pertinent patents associate with Carrier and UTC. It is noted that the UTC project director for this cooperative agreement is the inventor on the attached patents. UTC's response demonstrates its technical competency in the field of CO2 heating and air conditioning components.

In its response to question 10 of the attached waiver petition, UTC states that most patents in the field of CO2 HVAC technology are owned by European and Japanese companies, and that UTC is late to enter the CO2 heat pump market. There are three Japanese manufacturers producing commercially sized CO2 heat pump water heating systems. There are also prototype systems that have been installed in Europe. Successful completion of the work under this cooperative agreement and granting of the waiver will help establish a domestic industry in the high-performance CO2 heat pump water heating industry. Thus grant of the waiver 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 UTC 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 UTC agrees to substantial U. S. manufacture of subject inventions (attached hereto). Additionally, UTC agrees not to transfer subject inventions to any other entity

unless that other entity agrees to these same requirements. The petitioner has further agreed to modification of the data clause of the subject cooperative agreement (48 C.F.R. 952.227-14) by adding paragraph (k), Alternative VI, concerning contractor licensing of data.

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
Assistant Chief Counsel
Intellectual Property Law Division

Date: March 5, 2004

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:

Michael J. McCabe, EE-2J
Program Director
Office of the Building Technologies Program
Energy Efficiency and Renewable Energy

Date: 4/29/04

APPROVAL:

Paul A. Gottlieb
Assistant General Counsel
for Technology Transfer and
Intellectual Property

Date: 5-7-04

(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.