

STATEMENT OF CONSIDERATIONS

REQUEST BY UNITED TECHNOLOGIES CORPORATION FOR AN ADVANCE WAIVER OF PATENT RIGHTS TO INVENTIONS MADE UNDER COOPERATIVE AGREEMENT DE-FC26-05NT42453; W(A)-05-037, CH-1318

As set out in the attached waiver petition and in subsequent discussions with DOE Patent Counsel, United Technologies Corporation (UTC) has requested an advance waiver of domestic and foreign patent rights for all subject inventions made under the above subject cooperative agreement. The waiver will apply to inventions made by UTC employees and its subcontractors' employees, regardless of tier, except inventions made by subcontractors eligible to retain title to inventions pursuant to P.L. 96-517, as amended, and National Laboratories.

Referring to item 2 of UTC's petition, the purpose of this agreement is to develop necessary technology for the production of 99.96% pure H_2 from coal derived synthesis gas. This will be accomplished by combining the Water Gas Shift (WGS) reaction (CO and H_2O react to form CO_2 and H_2) with simultaneous selective separation of H_2 through a Pd alloy membrane. This membrane reactor technology has the advantage of 1) maximizing H_2 productivity, 2) eliminating complex, energy intensive processes like pressure swing adsorption to purify the H_2 , and 3) producing a CO_2 rich stream, that, after drying and a simple catalytic treatment to remove trace contaminants, is ready for compression and sequestration.

The work under this agreement is expected to take place over a period of twenty-four (24) months from July 1, 2005 through June 30, 2007 at a total cost of \$1,061,157. UTC will be obligated to cost share \$212,243, or 20 percent of the total cost of the project, while DOE will be providing the remaining eighty percent or \$848,914.

In view of the cost sharing and other equities between UTC and its subcontractors, it is anticipated that the parties will develop an appropriate allocation of patent rights among the participants to facilitate the expeditious development of the technology forming the subject matter of the agreement. Accordingly, DOE will waive title to all subject inventions made by UTC's employees and its subcontractors' employees, regardless of tier, except inventions made by subcontractors eligible to retain title pursuant to P.L. 96-517, as amended, or National Laboratories, to UTC or its subcontractors, as mutually agreed by the parties. Except as otherwise approved in writing by DOE Patent Counsel, a party's acceptance of a subcontract under this agreement, at any tier, shall constitute UTC's certification that it has provided that party with a copy of this Statement of Considerations and that party's notice to DOE that it accepts the terms and conditions of this advance waiver. Additionally, subcontractors who receive title under this waiver shall notify DOE Patent Counsel in writing of such disposition of patent rights.

Referring to items 5-9 of UTC's waiver petition, UTC is a multi-national corporation with recognized expertise and high quality products in many markets. UTC includes Pratt & Whitney, Hamilton Sundstrand, Sikorsky, Otis Elevators, Carrier, Chubb, Kidde, and UTC Power. UTC Fuel Cells, a unit of UTC Power, manufactures fuel cells that provide safe reliable power for the Space Shuttle, and over 245 Pure CellTM 200 Power System/ PC25 200 kW(e) fuel systems are operating worldwide. The PC25 fuel cell system incorporates a highly reliable fuel processing system for the conversion of Natural Gas into Hydrogen, and UTC has recently filed patent applications covering an Advanced Water Gas Shift Reactor System. This, coupled with UTC's cost sharing, clearly demonstrates the likelihood that UTC will continue development and commercialization of the results of this agreement.

Referring to item 11 of the waiver petition, UTC states that the technology that is envisioned to result from this research is a technological enabler required for the future hydrogen economy. Granting this waiver is not anticipated to have any adverse impact on competition as it will encourage UTC to commercialize the technology, allowing for technological competition in the market place. Once the technology is realized and demonstrated with a partner, it is expected to be made available for licensing to others.

This advance waiver of the Government's rights in inventions is subject to the government license, march-in rights, and preference for U.S. industry provisions set out in 35 U.S.C. 202-204. The advance patent waiver also includes the attached U.S. Competitiveness clause (paragraph t) which requires products embodying any waived invention or produced through the use of any waived invention be manufactured substantially in the United States unless the participant can show to the satisfaction of DOE that it is not commercially feasible to do so. The contractor further agrees to make the above condition binding on any assignee, licensee or other entity acquiring rights to any waived invention, including subsequent assignees or licensees. Should the Contractor or other such entity receiving rights in any waived 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 DOE.


Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in the commercialization of the results of the agreement in a fashion which will make the technology available to the public in the shortest practicable time. Therefore, upon evaluation of the waiver petition and in view of the objectives and considerations set forth in 10 CFR Part 784, all of which have been considered, it is recommended that the requested waiver be granted.


Mark P. Dvorscak
Assistant Chief Counsel
Intellectual Property Law Division

Date Oct. 20, 2005


Based upon the foregoing Statement of Considerations and representations in 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 will not apply to any modification or extension of the cooperative agreement, where through such modification or extension, the purpose, scope or cost of the cooperative agreement has been substantially altered.

CONCURRENCE:


George Rudins
Deputy Assistant Secretary
For Clean Coal, FE-20

Date 1/11/06

APPROVAL:


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

Date 1-23-06

(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.

WAIVER ACTION - ABSTRACT

W(A)-05-037 (CH-1318)

REQUESTOR

United Technologies
Corporation under DOE
Cooperative Agreement No.
DE-FC26-05NT42453

CONTRACT SCOPE OF WORK

Advanced Water-Gas Shift Membrane
Reactor

RATIONALE FOR DECISION

20% cost sharing

DISPOSITION