

## STATEMENT OF CONSIDERATIONS

REQUEST FOR ADVANCE WAIVER OF PATENT RIGHTS BY UNITED  
TECHNOLOGIES CORPORATION, MADE DURING THE PERFORMANCE  
AWARD NO. DE-FE0024011; W(A)-2014-027, CH-1721

Petitioner, United Technologies Corporation, has requested a waiver of: (a) domestic and foreign patent rights for all subject inventions conceived solely by United Technologies and (b) United Technologies' undivided interest, based on its employee's contributions, to joint domestic and foreign patent rights for all subject inventions conceived, arising under the above referenced awards.

The title of this award is "Combined Cycle Power Generation Employing Pressure Gain Combustion." The scope of the award is to evaluate pressure gain combustion technology as applied to turbine engines to gain a detailed assessment of the advantages of such a system. Petitioner is to design a combined cycled system, evaluate efficiency of that system, estimate the emissions, and assess the system for commercial potential.

The total anticipated cost of the award is \$616,286.00 including Petitioner's contribution of \$123,257.00, or about twenty percent (20%) of the total cost of the work under the award. This waiver is contingent upon Petitioner maintaining, in aggregate, the above cost sharing percentage over the course of the award. The period of performance is from 1 October 2014 to 31 March 2016.

Referring to items 5-9 of the waiver petition, Petitioner has engaged in research and development in the field of pressure gain combustion for greater than two decades. Further, Petitioner has invested approximately \$400,000 in the pressure gain combustion field in each of the last two years. Petitioner has invested in securing intellectual property rights on their developments in this field, and has a history of commercializing technology supported with federal funding including heating and cooling systems and fuel cell systems. With respect to the gas turbine market, Petitioner already has a significant commercial presence. Accordingly, Petitioner has significant experience in developing technology within this field and will continue to further develop the contracted work.


Petitioner has agreed that this waiver will be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, set out in 35 U.S.C. 202-204. Further, Petitioner has agreed to the attached U.S. Competitiveness provision (paragraph (t)). The Petitioner further has agreed to the attached revised paragraph (h) to submit annual reports on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by Petitioner and any of its licensee or assignees. If sold or transferred this reporting obligation will pass on to the buyer or transferee.

Petitioner has agreed that products embodying a waived invention or produced through the use of a waived invention will be manufactured substantially in the United States unless the Petitioner can show to the satisfaction of the DOE that it is not commercially feasible to do so. Petitioner has further agreed to make the above conditions binding on any assignee or licensee or


any entity otherwise acquiring rights in the waived inventions, including subsequent assignees and licensees. Should Petitioner or other such entity receiving rights in a 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 inventions is suspended until approved in writing by DOE.

Referring to item 10 of the waiver petition, granting this waiver will not have an adverse impact on competition. Research in efficiency gains in gas turbines is being performed by many entities, and pressure gain combustion is only one of many routes being studied to improve efficiency. Further, Petitioner has divested its turbine power generation business; therefore, it will be required to work in concert with business partners. Consequently, it is unlikely that granting the Petition will hinder competition in the field.

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 784, all of which have been considered, it is recommended that the requested waiver be granted.

  
Jacob A. Heafner  
Patent Attorney  
Intellectual Property Law Division

Date: 5/6/15

  
Brian J. Vally  
Deputy Chief Counsel  
Intellectual Property Division

Date: 5/6/15

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the U.S. 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 award, where through such modification or extension, the purpose, scope or cost of the award has been substantially altered.

CONCURRENCE:

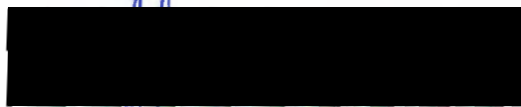


Mark Ackiewicz  
Acting Director  
Office of Advanced  
Fossil Technology Systems, FE-22

Date:

10/8/2015

APPROVAL:



John T. Lucas  
Assistant General Counsel for Technology  
Transfer and Intellectual Property, GC-62

Date:

10/20/2015



WAIVER ACTION - ABSTRACT

W(A)-2014-027

REQUESTOR

United  
Technologies  
Corporations

CONTRACT SCOPE

Combined Cycle Power Generation  
Employing Pressure Gain Combustion.”

RATIONALE FOR DECISION

United Technologies has engaged in the research and development in the field of pressure gain combustion for greater than two decades, has invested in the field, and has a history of commercializing technology supported with federal funding.

(h) Reporting on utilization of subject inventions

The Contractor agrees to submit annual reports on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor and any of its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as DOE may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by DOE in connection with any march-in proceedings undertaken by DOE in accordance with paragraph (j) of this clause. To the extent data or information supplied under this paragraph is considered by the Contractor, its licensee or assignee to be privileged and confidential and is so marked, DOE agrees that, to the extent permitted by law, it shall not disclose such information to persons outside the Government.

(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.