STATEMENT OF CONSIDERATIONS

REQUEST BY GENERAL ELECTRIC GLOBAL RESEARCH CENTER FOR AN ADVANCE WAIVER OF PATENT RIGHTS TO INVENTIONS MADE UNDER COOPERATIVE AGREEMENT DE-FC26-08NT05868; W(A)-09-025 ; CH-1490

General Electric Global Research Center (GE-GRC), requests an advance waiver of domestic and foreign patent tights for all subject inventions made under the above cooperative agreement for work entitled, "Fuel Flexible Combustion Systems for High-Efficiency Utilization of Opportunity Fuels in Gas Turbines." The purpose of the cooperative agreement is to define, develop, and test new fuel nozzle technology concepts for gas turbine operation on a wide spectrum of opportunity fuels and/or fuel blends. Successful technology concepts will be developed and tested through full pressure, full temperature single nozzle component combustion testing. This waiver is for inventions of GE-GRC only.

The work under this subcontract is expected to take place from October 1, 2008 through September 30, 2011, at a total cost of \$2,856,686. GE-GRC will provide 30% cost share or \$857,006. DOE will provide the remaining 70% or \$1,999,680.

With respect to its technical competency in the field of fuel nozzles for gas turbines, in response to questions 4 and 5 of its waiver petition, GE-GRC states it has extensive experience in the design and development of combustion systems for power generation gas turbines, as well as decades of systems engineering experience in the design of complex commercial energy systems and their optimization relative to system performance compared to cost. GE states it has specific experience in the areas of plasma-assisted combustion and fuel-flexible combustion hardware development. About 19 patent disclosures have been internally submitted in the area of plasma-assisted combustion and fuel-flexible combustion hardware development. GE-GRC has demonstrated its technical competency in the field of fuel nozzles and gas turbines.

In response to questions 9 and 10 of its waiver petition, GE-GRC states that all gas turbine manufacturers have some level of fuel flexibility within their existing product lines, and many also have systems designed for specific applications or unusual fuel specifications. Different technologies will be more or less appropriate for specific applications. GE further states that and technology development and innovation are procompetitive and will spark continued research in this area of technology. Therefore grant of the waiver will have a positive effect on competition and market concentration.

This advance waiver of the Government's rights in inventions is subject to the usual advance patent waiver licensing provisions, and 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 Deputy Chief Counsel Intellectual Property Law Division

Date: April 13 2019

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:

Douglas E Raempf Office of Industrial Technology Program Office of Energy Efficiency and Renewable Energy, EE-2F

Date

APPROVAL:

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

Date

(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.