STATEMENT OF CONSIDERATIONS

REQUEST BY GENERAL ELECTRIC GLOBAL RESEARCH FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER DOE CONTRACT NO. DE-FC26-08NT01579; W(A)-09-036, CH-1501

The Petitioner, General Electric Global Research (GE), was awarded this cooperative agreement for the performance of work entitled, "High-Efficiency Sold-State Downlight Luminaries with Novel Cooling". According to its response to question 2, GE states that this program will develop novel synthetic jet cooling technology for cooling LED luminaries. In addition to synthetic jet technology, driver electronics, light engine, optical design, and fixture will be designed and demonstrated. This waiver is only for inventions of GE made under the cooperative agreement.

The total estimated cost of the contract is \$2,886,040 with GE providing a 25% cost-share or \$721,510. DOE is providing the remaining 75% share of \$2,164,530. The period of performance is from October 1, 2008 through September 30, 2010.

In its response to questions 5 and 6 of the attached waiver petition, GE has described its technical competence in the field of LED lighting. Through GE Lumination, GE is a world leader in the development and commercialization of LED lighting products and has demonstrated expertise in the area of thermal management technology and its application to lighting products. GE lists selected patents and publications as evidence of this competence. GE's response demonstrates its technical competency in the field of LED lighting technologies.

In its response to question 10 of the attached waiver petition, GE states that grant of the waiver will not have a negative effect on competition in the LED marketplace. There is a variety of cooling alternatives available or under development. Synthetic jet cooling represents an attractive method for efficiently cooling electronic devices, including LED luminaries. However, there are competing alternatives such as passive heat sinks, heat pipes, and muffin fans. Because of the competing alternatives available in the thermal management area, it is unlikely that the acquisition of the waiver will place GE in a preferred position in the market. Therefore, grant of the waiver will have a positive effect on competition and market concentration.

In addition, this project is under the Solid State Lighting (SSL) Program, and subject to a Determination of Exceptional Circumstances. The Solid State Lighting Program is to develop advanced solid state lighting technologies that, compared to conventional lighting technologies, are much more energy efficient, longer lasting, and cost-competitive, by targeting a product system efficiency of 50 percent with lighting that accurately reproduces sunlight spectrum. The SSL program has a multi-tier structure. One tier consists of a competitively selected SSL Partnership whose membership includes organizations that have or will have the capacity to manufacture SSL systems, i.e., the entire package from wall plug to illumination. Another tier is the Core Technology Program, which will focus on finding solutions to the more difficult shared technical barriers identified by the SSL partnership. It focuses on the R&D efforts of universities, national laboratories, and other research institutions. For the link between the SSL Partnership and the Core Technology Program to succeed, the SSL Partnership will require a guaranteed right to license the technologies developed by Core Technology Program participants. The Core Technology Program participants perform work subject to the exceptional circumstance made for the SSL program: any patent waiver granted to a large business will contain language requiring the large business to offer to each member of the SSL Partnership the first option to enter into a non-exclusive license for subject inventions developed under the Core Program, upon terms that

are reasonable under the circumstances, including royalties. In addition, any entity having the right to use or sell any subject invention in the United States and/or any other country, including the Core Technology Program participant, must agree that any products embodying the subject invention or produced through the use of the subject invention will be substantially manufactured in the United States.

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

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:

James Brodrick Program Manager Office of Energy Efficiency and Renewable Energy, EE-2J

Date October 1 2012

APPROVAL:

John V. Lucas Assistant General Counsel for Technology 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.