

## STATEMENT OF CONSIDERATIONS

### REQUEST BY GENERAL ELECTRIC COMPANY FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER DOE AWARD NO. DE-EE0005143 W(A) 2011-058

The Petitioner, General Electric Company (GE), has requested a waiver of domestic and foreign patent rights for all subject inventions arising from its participation under the above-referenced award entitled "Superconductivity for Large Scale Wind Turbines." Oak Ridge National Laboratory is performing work under this award, but is not subject to this waiver petition.

The primary objective of this project is to apply suitable technologies to the drive train to reduce the cost of energy produced by wind turbines. GE proposes to realize this objective by applying transformational technology in the form of low-temperature superconductivity to the design of a direct-drive wind turbine generator at 10MW power level; a design concept that is also beneficial at lower power levels, but leverages the maximum benefits of superconductivity that are usually obtained at higher power levels.

The total anticipated cost of the agreement is \$3,029,000, with GE cost sharing \$1,086,000, or 35%<sup>1</sup>. Oak Ridge will be cost sharing \$848,000. This waiver is contingent upon GE maintaining the above cost share percentage.

As indicated in more detail in its petition, GE employs over 2000 scientists and engineers. GE has extensive experience in electrical rotating machinery design as applied to wind turbine generators, superconducting machines, and cryogenic cooling methodologies. The Electrical Machines Laboratory and the Electromagnetics and Superconducting Laboratory at GE are staffed with over 20 scientists and engineers, most with doctorate degrees in electromagnetics, electrical machine design, and superconductivity. The team has a proven track record in innovation and research and has been involved in key programs for the development of rotating machinery, superconducting applications, and cooling methodologies for GE businesses, including magnetic resonance imaging applications. GE has the ability and experience to successfully employ the full range of skills and facilities as required on this project.

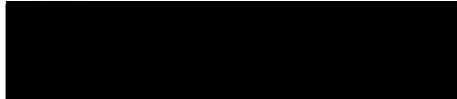
GE has agreed that this waiver shall be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, comparable to those set out in 35 U.S.C. 202-204. Further, GE has agreed to the U.S. competitiveness provisions as attached to this Statement. In brief, GE has agreed that products embodying intellectual property developed under this agreement shall be substantially manufactured in the United States, and that GE will not license, assign, or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. GE further clarifies that its agreement to substantially manufacture in the U.S. will be met if the majority (i.e., at least 51%) of each product embodying any waived invention or produced through the use of any waived invention is manufactured in the U.S.

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<sup>1</sup> This figure is based on the final budget for the project, rather than the figures in the waiver petition.

Referring to item 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition. As the penetration of wind energy significantly increases in the next few decades, additional advancements, such as the ones that GE will address in its DOE award, will be needed to contribute to the overall improvement of wind energy technology. The market is competitive, with multiple players. All manufacturers in this area are constantly striving to improve their products to better serve customer needs, and there are several competing approaches that can be used to achieve the objectives. Due to the many players in the market and their diverse technical solutions, granting this waiver is not expected to adversely affect competition.

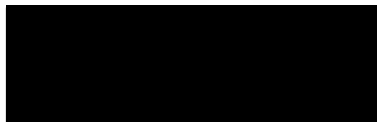
Considering the foregoing, it is believed that granting this waiver will provide GE with the necessary incentive to invest its resources in commercializing the results of the agreement in a manner that will make the above technology available to the public in the shortest time. Therefore, upon evaluation 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.

  
Julia Cook Moody  
Patent Counsel  
Golden Field Office

Date: 4/3/2013

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 determined above, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of the agreement, where through such modification or extension, the purpose, scope, or cost of the agreement has been substantially altered.

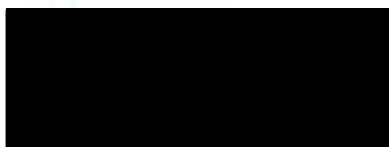
CONCURRENCE:



José Zayas  
Program Manager  
Wind & Hydropower Technologies  
Program

Date: 4/4/13

APPROVAL:



John T. Lucas  
Acting Assistant General Counsel for  
Technology Transfer and Intellectual  
Property

Date: 4/4/2013

## **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 DOE that it is not commercially feasible to do so. In the event 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 further agrees to make the above condition binding on any assignee or licensee or any entity otherwise 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 any waived invention is suspended until approved in writing by DOE. Contractor's agreement as set forth herein to manufacture in the U.S. will be met if the majority (i.e., at least 51%) of each product embodying any waived invention or produced through the use of any waived invention is manufactured in the U.S.