

## STATEMENT OF CONSIDERATIONS

REQUEST FOR ADVANCE WAIVER OF PATENT RIGHTS BY THE  
GENERAL ELECTRIC COMPANY, UNDER DOE AWARD NO. DE-FC36-  
07GO17045; W(A)-08-020, CH-1446

The Petitioner, The General Electric Company (GE) has requested a waiver of:  
(a) domestic and foreign patent rights for all subject inventions conceived solely by GE  
and (b) GE's 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 cooperative agreement.

The objective of GE's cooperative agreement is to lower the cost of photovoltaic  
systems in the U.S. GE will produce lower-cost, high-purity feedstock, develop high  
efficiency bifacial cells in low concentration modules, produce low cost solar grade  
silicon from FRB fines, produce low-cost molded wafers, certify flexible thin-film  
modules adaptable to multiple BIPV and conventional markets, develop a plan for thin  
film module manufacturing, and lower systems costs based on module developments,  
BOS component costs reductions, and innovative system installation strategies.

The total anticipated cost of the cooperative agreement is \$46,217,121 including  
GE's contribution of \$26,217,130, or fifty-seven percent (57%) of the total cost of the  
work under the cooperative agreement. This waiver is contingent upon GE maintaining,  
in aggregate, the above cost sharing percentage over the course of the agreement.

Referring to items 4-9 of the waiver petition, GE is a leading technology company  
that provides commercial products throughout the world. GE has over 50 years of  
experience in electronics and electronic packaging research including over 15 years in  
photovoltaics and solar energy. GE has already invested over \$6,000,000 towards  
commercialization and the realization of a 10 megawatt wafer product line that would be  
directly associated with this contract. GE facilities include a state-of-the art pilot line  
with a directional solidification furnace for silicon refining, silicon grinding equipment,  
and all supporting cell/module manufacturing and characterization tools. GE's solar  
research is inclusive of many concepts inherent to photovoltaics including, but not  
limited to, fabricating molded silicon wafers, doping wafers into photovoltaic cells,  
interconnecting cells to form a module, power inversion, thin-films, high efficiency cells  
(e.g. U.S. patents 6,420,643 and U.S. Patent Application 20070023081).

At this time a number of photovoltaic technologies are in commercial or pre-  
commercial stages. New technologies generated under this cooperative agreement will  
offer alternatives to the existing commercial technologies, fostering greater competition.  
Therefore, the grant of this waiver should effectively promote the continued  
development and commercial utilization of the subject inventions since GE will be able  
to develop these technologies and incorporate them into its commercial portfolio without  
an adverse patent interest overshadowing its development efforts. Thus, the waiver is

necessary for development to proceed given the size and nature of the investment necessary to commercialize hydrogen distribution and storage inventions.

GE 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)). In brief, 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. GE 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 GE 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. Although a large company with significant investment in photovoltaic technology, GE currently has less than one percent of the market share of photovoltaic cells and modules. As there are many other companies working to lower the cost of photovoltaics, the granting of this waiver will only help encourage competition in the market.

Considering the foregoing, it is believed that granting this waiver will provide GE 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.

[Redacted]  
Brian J. Lally  
Assistant Chief Counsel  
Intellectual Property Law Division

Date: 8/21/08

[Redacted]  
Michael J. Dobbs  
Patent Attorney  
Intellectual Property Law Division

Date: 8/13/08

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 of 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:

[Redacted]  
Thomas P. Kimbis  
Acting Program Manager  
Office of the Solar Energy  
Technology Program  
EE-2A

Date: 9/3/08

*For J. Luckatsky*

APPROVAL:

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

Date: 8-8-08

WAIVER ACTION - ABSTRACT  
W(A)-08-020

REQUESTOR

The General  
Electric  
Company

CONTRACT SCOPE

Produce lower-cost, high-efficiency  
photovoltaic cells and lower system  
costs based on module developments,  
BOS component costs reductions, and  
innovative system installation strategies

RATIONALE FOR DECISION

GE has contributed research  
expertise and significant capital  
for the development of cost-  
effective photovoltaic cells and  
the grant of this waiver will  
encourage further development  
and commercialization.

(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.