

## Statement of Considerations

REQUEST BY THE GENERAL ELECTRIC COMPANY FOR AN  
ADVANCE WAIVER OF DOMESTIC AND FOREIGN RIGHTS IN  
SUBJECT INVENTIONS MADE IN THE COURSE OF OR UNDER  
LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
SUBCONTRACT NO. 85X-SZ581C UNDER PRIME CONTRACT NO. DE-  
AC05-96OR22464; DOE WAIVER DOCKET W(A)-98-008 [ORO-740]

The General Electric Company (GE) has made a timely request for an advance waiver to worldwide rights in Subject Inventions made in the course of or under Lockheed Martin Energy Research (LMER) Subcontract No. 85X-SZ581C under LMER Prime Contract No. DE-AC05-96OR22464. In addition, GE wishes to acquire a nonexclusive, paid-up irrevocable, worldwide license to make, have made, and use certain subcontractors' inventions and discoveries made under this subcontract when the subcontractor has agreed to such license. The scope of the work is to achieve a cost effective yield of single crystal and directionally solidified components by evaluating and implementing liquid metal cooling directional solidification technology and adapting novel alumina core formulations. The work is sponsored by the Office of Industrial Technologies.

The dollar amount of the subcontract is \$6 million with GE and its subcontractors cost sharing \$3.5 million or 58% of the subcontract. GE is cost sharing about 80% of the \$3.5 million while the subcontractors' share is 20%.

GE's experience and expertise will contribute substantially to development of the inventions made under the subcontract. GE has extensive experience in directional solidification processing and associated ceramics as shown by its listing of representative patents. GE is also a leading manufacturer of electrical generation equipment.

GE has made a substantial financial and other investment directly related to the work to be performed under this subcontract. GE has done over 30 years of research on directional solidification processing and mold and core technology. For this subject subcontract, a novel liquid metal cooling furnace has been designed and built, and a facility for constructing shell molds has been updated at a total 1997-98 cost of \$2 million.

GE does not itself manufacture single crystal or columnar casting or cores for such castings, but buys castings from vendors such as Howmet and Precision Castparts, who will be subcontractors to GE under this effort. As stated, GE wishes to acquire a nonexclusive, paid-up irrevocable, worldwide license to make, have made, and use certain subcontractors' (those not subject to Public Law 96-517) inventions and discoveries made under this contract. Title to subject inventions would remain with the

subcontractors. In addition, it is noted that this waiver would not extend to inventions made by DOE laboratories who may perform work under this effort.

GE would only obtain such rights in its subcontractors' inventions only if the subcontractor agrees to GE obtaining rights in these inventions by providing a letter to DOE containing a statement or by signing a subcontract having terms indicating such acknowledgment and agreement. GE states in its petition and subsequent letter to DOE that such an arrangement would provide economic incentives to the casting vendor subcontractor to commercialize the liquid metal cooling process and also to the core vendor subcontractors to commercialize the alumina core process, since both vendors would retain patent rights, and GE would be permitted to utilize the technology and acquire the technology from competing vendors. It is noted that PCC Airfoils, a subcontractor to GE in this effort, has already provided such written agreement for GE to obtain license rights in its inventions.

GE has agreed to accept the attached DOE waiver terms and conditions if the requested waiver is granted. Specifically, GE agrees to abide by the conditions set forth at 35 U.S.C. §202-204 relating to the Government license, march-in rights, and preference for U.S. industry.

GE has also agreed that this waiver be subject to the attached U.S. Competitiveness (paragraph u) and Adequate Recognition (paragraph v) Clauses. The Adequate Recognition clause requires the Participant to obtain DOE approval of any transfer or other alienation of any intellectual property first specifically developed by the Participant in the performance of the work funded under the DOE ATS Program -- including technical data and subject inventions -- (hereafter termed "Intellectual Property") to any foreign company or American subsidiary of a foreign company. Such approval is contingent on agreement by the company to whom such rights are transferred or otherwise alienated to substantially manufacture any specifically developed ATS products embodying any such Intellectual Property or produced through the use of any such Intellectual Property in the United States. In the event the company acquiring such rights does not meet the substantial United States manufacture requirement, the clause provides for repayment of the funds contributed by DOE to all phases of the Participant's ATS program, licensing or return to DOE of foreground Intellectual Property and licensing of background Intellectual Property.

Granting of the waiver should have little effect on competition since the end products produced from the developed technology would be cast by many GE vendors who typically compete for this work.

Grant of the requested waiver should serve as encouragement to other DOE contractors that significant cost sharing will be recognized as an acceptable consideration for granting greater rights in Subject Inventions.

In view of the acceptable level of cost sharing by GE and the objectives and considerations set forth in 10 CFR 784.4, all of which have been considered, it is recommended that the requested waiver for worldwide patent rights in subject inventions and a license in subcontractors' subject inventions be granted.



Emily G. Schneider  
Patent Attorney

Based on the foregoing Statement of Considerations and the representations in the attached Waiver Petition, it is determined that the interest of the United States and the general public will best be served by a waiver of U.S. and foreign patent rights, and therefore, the waiver is granted. This waiver shall not apply to a modification or extension of the cost-shared contract where, through such a modification or extension, the purpose, scope or cost of the contract has been substantially altered.


CONCURRENCE:



Patricia A. Hoffman  
EE/Office of Industrial Technologies  
Program Manager

Date: Nov 19 1999

APPROVAL:



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

Date: 11-24-99