

STATEMENT OF CONSIDERATIONS

PETITION FOR ADVANCE WAIVER OF PATENT RIGHTS BY ASE AMERICAS, INC., UNDER NREL SUBCONTRACT NO. NREL-ZAX-8-17647-10 UNDER PRIME CONTRACT NO. DE-AC02-83CH10093; W(A)-98-013; CH-0978

The Petitioner, ASE Americas, has requested a waiver of domestic and foreign patent rights for all subject inventions arising from its participation under the above referenced subcontract. The subcontract is entitled "PVMaT Cost Reductions in the EFG High Volume Manufacturing Line."

The Photovoltaic Manufacturing Technology (PVMaT) project was initiated in FY 1991 to assist U.S. industry in the improvement of module manufacturing processes and the substantial reduction of module manufacturing cost. During this particular subcontract, Petitioner will address the PVMaT goals of PV module cost reduction and improved PV module manufacturing process technology. The Petitioner will focus its research on improving PV manufacturing systems through technical improvements in process integration, statistical process control implementation, data systems integration, and ISO9000 and ISO14000 implementation. These improvements will be directed at achieving a 10% reduction of yield loss in the areas of electrical and mechanical performance, a 10% reduction in costs associated with chemical waste, and an overall 9% reduction in the cost of manufacturing.

The total cost of the subcontract, during its three year term, is expected to be \$6.7 million, with the Petitioner contributing \$3.8 million, for approximately fifty seven percent (57%) cost sharing. The waiver is contingent upon the Petitioner maintaining the above cost sharing percentage during the course of the subcontract.

As noted in its waiver petition, Petitioner has been in the business of developing and manufacturing solar cells since 1973, with some of its employees being involved in crystal growth and solar cell technology for at least 10 years. As brought out in the waiver petition, Petitioner has significant technical expertise in the technology covered by the scope of work in this

subcontract and has an extensive portfolio of patents and technical publications. Petitioner also states that, during the period 1994 to 1998, it has invested more than \$15 million in company funded research and development in this technology and in improving its manufacturing facilities. Considering Petitioner's technical expertise, established market position, and significant investment in this technology, including sizable cost sharing in this subcontract, it is reasonable to conclude that the Petitioner will continue to develop and ultimately commercialize the technology and products which may arise from this subcontract.

Petitioner 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, Petitioner has agreed to the U.S. competitiveness provisions as attached to this Statement. In brief, Petitioner has agreed that products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless Petitioner can show to the satisfaction of the DOE that it is not commercially feasible to do so. Further, Petitioner has agreed that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements.

Referring to item 10 of the waiver petition, granting this waiver is not expected to have any adverse impact on competition. There are currently numerous technologies, as well as competitors, in the field of integrated PV cell manufacturing. In addition to several domestic companies, there are also many foreign PV manufacturers with extensive experience and market share in the PV cell arena. The success of this subcontract can be expected to stimulate further investment and competition in this, as well as other related technologies.

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 subcontract in a fashion which will make the above 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.

[REDACTED]
Thomas G. Anderson
Assistant Chief Counsel
Office of Intellectual
Property Law

Date: 11/24/97

[REDACTED]
Daniel D. Park
Patent Attorney
Office of Intellectual
Property Law

Date: 11/24/98

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 shall not apply to any modification or extension of the subcontract, where through such modification or extension, the purpose, scope or cost of the subcontract has been substantially altered.

CONCURRENCE:

[REDACTED]
James Rannells,
Director, Office of
Photovoltaics and Wind
EE-11

Date: 1/20/99

APPROVAL:

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

Date: 1/22/99

(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.

Rights in Data - General (JUN 1987), is amended by adding paragraph (k) as follows:

(k) Contractor Licensing. Except as may be otherwise specified in this contract as data not subject to this paragraph, the contractor agrees that upon written application by DOE, it will grant to the Government and responsible third parties, for purposes of practicing a subject of this contract, a nonexclusive license in any limited rights data or restricted rights software on terms and conditions reasonable under the circumstances including appropriate provisions for confidentiality; provided, however, the contractor shall not be obliged to license any such data if the contractor demonstrates to the satisfaction of the Secretary of Energy or designee that:

(1) Such data are not essential to the manufacture or practice of hardware designed or fabricated, or processes developed, under this contract;

(2) Such data, in the form of results obtained by their use, have a commercially competitive alternate available or readily introducible from one or more other sources;

(3) Such data, in the form of results obtained by their use, are being supplied by the contractor or its licensees in sufficient quantity and at reasonable prices to satisfy market needs, or the contractor or its licensees have taken effective steps or within a reasonable time are expected to take effective steps to so supply such data in the form of results obtained by their use; or

(4) Such data, in the form of results obtained by their use, can be furnished by another firm skilled in the art of manufacturing items or performing processes of the same general type and character necessary to achieve the contract results.

WAIVER ACTION - ABSTRACT
W(A) -98-013

<u>REQUESTOR</u>	<u>SUBCONTRACT SCOPE OF WORK</u>	<u>RATIONALE FOR DECISION</u>
ASE Americas	PVMaT Cost Reductions in the EFG High Volume Manufacturing Line	57% cost sharing