

STATEMENT OF CONSIDERATIONS

REQUEST BY GOLDEN PHOTON INC. FOR AN ADVANCE WAIVER OF
DOMESTIC AND FOREIGN RIGHTS UNDER NREL SUBCONTRACT
NUMBER: ZAI-4-11294-3 UNDER DOE CONTRACT NO: DE-AC02-
83CH10093; W(A)-94-003; CH-0827

Golden Photon Inc. (GPI), a wholly owned subsidiary of Golden Technologies Company, Inc., has petitioned for an Advance Waiver of Patent Rights under NREL Subcontract No. ZAI-4-11294-3, entitled "Photovoltaic Manufacturing Technology, Phase 2B - Process Specific Issues." GPI requests that, in granting the waiver, substantially the same intellectual property provisions which were approved for its previous NREL Subcontract No. ZN-0-19019-1, be included in this waiver. The object of the previous subcontract was to develop improved materials technology and fabrication processes for production of CdS/CdTe photovoltaic (PV) modules.

The object of the above-identified subcontract is to design and implement a commercially viable manufacturing process to produce CdTe photovoltaic modules, and in particular, reduce module production costs, increase average module performance and identify and evaluate modifications that will significantly increase production capacity. GPI plans to meet these objectives by designing, debugging, and operating up to a 10 MW/yr automated, continuous PV manufacturing line that produces .37-m² thin film CdTe PV modules.

The total estimated cost for performance of the definitized subcontract is \$9,650,343.00, of which GPI's share will be fifty percent (50%) or \$4,825,171.50. The subcontract is to be executed in three phases over a period of 36 months.

As set out in the attached waiver petition, GPI has requested a waiver of DOE's domestic and foreign rights to all inventions conceived or first actually reduced to practice by GPI and its subcontractors, regardless of tier, other than domestic small businesses, universities and nonprofit organizations within the meaning of P.L. 96-517, as amended, in the course of or under the subcontract. GPI has already obtained the concurrence of a number of its subcontractors to this approach and has agreed to make each subcontractors' acceptance of this condition a condition precedent to the Government's advance waiver of patent rights to GPI of that subcontractor's inventions. It is believed that this approach will minimize fragmentation of invention rights among the parties as the program progresses, while at the same time expediting GPI's subcontract negotiations. As a practical matter, this approach also gives GPI a mechanism to obtain meaningful cost sharing or other rights to facilitate timely commercialization of the technology. In this connection,

it should be noted that this also contemplates the parties allocating title or other rights to inventions among themselves as they deem appropriate during the course of their negotiations consistent with the terms of this waiver. In such cases, title may be waived directly to GPI's subcontractor upon mutual agreement of GPI and the subcontractor involved.

GPI has agreed that this waiver shall be subject to the standard march-in and preference for U.S. industry provisions, as well as the background patent licensing and U.S. competitiveness provisions as attached to this Statement. Additionally, GPI has agreed to comparable background patent and data licensing provisions. Briefly summarized, in principle GPI has agreed to license its background patents and data to third parties' on DOE's request if GPI fails to continue development and ultimately build a manufacturing facility in the United States within eight years of executing the subcontract.

GPI appears to be fully committed to the development and ultimate commercialization of this technology. As brought out in items 5 and 6 of its waiver petition, GPI and its affiliated companies appear to have assembled and developed a substantial technical base and potential commercial position in photovoltaic manufacturing process technology. In this regard, GPI is currently in the process of moving its photovoltaic module manufacturing operations from the former El Paso facility to a new 22,000 square foot facility in Golden, Colorado to better facilitate its goal of constructing a commercial-scale photovoltaic manufacturing plant. Additionally, as indicated in items 7-9, GPI has invested about \$6.1 million in developing photovoltaic module and module manufacturing technology. Further, in addition to the \$4.9 million that GPI expects to invest in the subject subcontract, it anticipates investing an additional \$27.8 million for the establishment of a 10 megawatt photovoltaic manufacturing facility. This activity and associated investment, and GPI's agreement to establish a U.S. manufacturing facility, clearly demonstrates GPI's commitment to the technology and indicates the likelihood of success for GPI's efforts to commercialize the results of this agreement.

Referring to item 10, granting this waiver is not anticipated to have any adverse impact on competition. There are currently a variety of companies pursuing a number of photovoltaic technologies. The success of any one of these technologies would be expected to stimulate investment in other competing technologies.

Considering the foregoing, it is believed that granting this waiver will provide GPI with the necessary incentive to invest its resources in the commercialization of the results of the subcontract in a fashion which will make the subcontract's benefits 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 41 CFR 9-9.109-6, all of which have been considered, it is recommended that the requested waiver be granted.

[Redacted Signature]

Thomas G. Anderson
Assistant Chief Counsel
Intellectual Property Law
Division

Date: 3/7/94

[Redacted Signature]

Daniel D. Park
Patent Attorney
Intellectual Property Law
Division

Date: 3/9/94

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, or in the event that GPI's obligation for cost sharing is less than fifty percent (50%) of the total cost of the subcontract.

CONCURRENCE:

[Redacted Signature]

Robert H. Annan
Director, Office of Solar
Energy, HQ

Date: 5/31/94

APPROVAL:

[Redacted Signature]

Richard E. Constant
Assistant General Counsel
Intellectual Property - HQ

Date: 5/31/94

WAIVER ACTION - ABSTRACT
W()-94-003

<u>REQUESTOR</u>	<u>CONTRACT SCOPE OF WORK</u>	<u>RATIONALE FOR DECISION</u>	<u>DISPOSITION</u>
Golden Photon, Inc.	Development of a commercially viable photovoltaic manufacturing process.	50% cost sharing	

ADVANCE WAIVER PATENT RIGHTS

U.S. Competitiveness

The Contractor agrees that products, processes or methods, relating to photovoltaic manufacturing process technology, used or sold by it or its affiliates embodying subject inventions will be manufactured, practiced or provided substantially in the United States until the earlier of five (5) years after submission by Contractor of the final report as required under paragraph (e)(2) of this clause or start-up by the Contractor (alone or in association with others) of a U.S. based manufacturing plant having an annual capacity to produce photovoltaic modules with a total rated modular capacity of at least ten megawatts, unless the Contractor can show to the satisfaction of the Contracting Officer that it is not commercially feasible to do so. In the event the Contracting Officer agrees to foreign manufacture in exception to the foregoing, there will be a requirement that the Government's support of the area of technology which was the subject of this waiver petition 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.

Background Patents

- (1) "Background Patent" means a domestic patent covering an invention or discovery which is not a Subject Invention and which is owned or controlled by the Contractor at any time through the completion of this contract:
 - (i) Which the Contractor, but not the Government, has the right to license to others without obligation to pay royalties thereon, and
 - (ii) Infringement of which cannot reasonably be avoided upon the practice of any specific process, method, machine, manufacture or composition of matter (including relatively minor modifications thereof) which is a subject of the research, development, or demonstration work performed under this contract.
- (2) The Contractor agrees to and does hereby grant to the Government a royalty-free, nonexclusive license under any Background Patent for purposes of practicing a subject of this contract by or for the Government in research, development, and demonstration work only.