

PMC-EF2a

**U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION**



RECIPIENT: SolarWorld Industries America, Inc.

STATE: OR

PROJECT TITLE : Device Architecture Simplification of Laser Patterning in High Volume Crystalline Silicon Solar Cell Fabrication Using Intensive Computation for Design and Optimization

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000492	DE-EE0005313	GFO-0005313-001	5313

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

- B3.6** Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).
- A9** Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.

Rational for determination:

DOE is proposing to provide federal funding to SolarWorld Industries America, Inc. (SWIA) to perform laboratory prototype testing on a simplified hybrid metal-wrap-through and laser-fired-contact solar cell design.

Laboratory work would be conducted at four different facilities. All facilities have completed an R&D questionnaire addressing the protocols in place regarding laboratory safety, risk management, chemical handling and waste disposal.

SWIA is a high volume solar manufacturing site located at 25300 NW Evergreen Road, Hillsboro, Oregon 97124. The facility Environmental Management System is ISO 14001 certified. The facility is operating under the following permits: Industrial Wastewater permit (Cleanwater Services #133218), ODEQ Air Permits (#34-0010 and 34-9508) and a 1200-Z Stormwater Permit. The site Solid Waste Management Plan (IA-HSE-W-027) covers all aspects of storing, handling, shipping, and profiling wastes. The site is a Conditionally Exempt Small Quantity Generator under RCRA but maintains a RCRA Generator ID (#OR000026624.)

The development of the equipment to perform this experimentation would occur at Newport Corporation (101 North Billerica Avenue, Building 3 North Billerica, MA 01862). This facility operates under OSHA standards for light industry and includes an active corporate safety program with local site representation and regular internal audit. The lab includes an on-site, trained laser safety officer. For laser safety, the instruments have interlocked panels, safety override switches, laser blocking view-ports, extensive labeling and operator and service manuals.

Palo Alto Research Center (PARC) is a research and development facility located at 3333 Coyote Hill Rd. Palo Alto, CA 94304. The proposed project would be performed in a printer lab and a screen printing lab. All safety procedures and protocols are monitored internally by PARC's Environmental Health and Safety Department (EH&S) and are subject to local and federal regulatory bodies.

Fraunhofer USA, Center for Laser Technology is located in a modern industrial park 30 miles west of Detroit (44792 Helm Street, Plymouth, MI 48170). Fraunhofer complies with OSHA and MIOSHA standards as well as industrial laser safety standards. The facility has a certified laser safety officer (LSA) on staff. Chemical and heavy metals are stored in approved containers that are locked in cabinets. A professional waste disposal firm is contracted to remove these from the premise.

Based on this information, DOE has determined the work outlined is consistent with activities identified in categorical exclusion A9 (information gathering) and B3.6 (indoor bench-scale research and conventional laboratory operations).

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

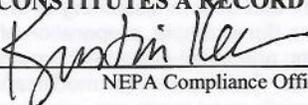
Note to Specialist :

Cristina Tyler 10.31.2011

DOE Funding: \$4,636,633
Cost Share: \$1,328,991
Total Project Cost: \$5,965,624

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



NEPA Compliance Officer

Date: _____

11/1/2011

FIELD OFFICE MANAGER DETERMINATION

Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

- Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____

Field Office Manager

Date: _____