

PMC-ND

(1.08.09.13)

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT: Picasolar Inc.

STATE: AR

PROJECT TITLE : One-Step Super Emitters for High Efficiency Solar Cells

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001225	EE0007191	GFO-0007191-001	

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:

- A9 Information gathering, analysis, and dissemination** Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
- B3.6 Small-scale research and development, laboratory operations, and pilot projects** Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Picasolar Inc. to design and fabricate first generation manufacturing equipment to produce solar photovoltaic (PV) cells using emitter technology to deposit hydrogen onto the surface of the solar cell.

Proposed project activities would include design and fabrication of the emitting equipment; fabricating and testing high efficiency solar cells made of silicon that use hydrogen and boron doping sources and silver grid contacts at bench scale; and manufacturing solar panels at pilot scale. Design and fabrication of the emitting equipment would be completed by an established subcontractor. Fabrication and testing of high efficiency solar cells would occur at Georgia Tech in Atlanta, GA and at Picasolar facilities in Fayetteville, AR. The pilot-scale manufacturing of 1,000 solar panels would be subcontracted and would occur at an existing, permitted facility.

The project would involve the use of acids and solvents. All such handling would occur indoors at existing laboratories and manufacturing facilities. Some of these materials may have potential health and safety hazards. All hazardous materials would be managed in accordance with federal, state, and local environmental regulations. Existing corporate health and safety policies and procedures would be followed including employee training. No change in the use, mission or operation of existing facilities would arise out of this effort. The project may result in silicon substrates that are determined to be waste which would be discarded using the silicon waste procedures established at the respective facilities. The facilities at which lab work and field testing would occur are purpose-built for the type of activities being proposed; therefore, no adverse impacts to sensitive resources are expected as a result of the proposed project. The facilities have all applicable permits in place, and would not need additional permits for the proposed activities.

Based on review of the project information and the above analysis, DOE has determined that the proposed project would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusion A9 "information gathering, analysis and dissemination," and B3.6 "small-scale research and development, laboratory operations and pilot projects" and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

Solar Energy Technologies Office

This NEPA determination does not require a tailored NEPA provision.

Review completed by Logan Sholar on 5/2/2016

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



Electronically Signed By:

Kristin Kerwin

NEPA Compliance Officer

Date: _____

5/2/2016

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: _____