

PMC-EF2a

(20102)

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



RECIPIENT: Plant PV, Inc.

STATE: CA

**PROJECT TITLE :** Three-dimensional minority carrier lifetime mapping of thin film semiconductors for solar cell applications

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
	DE-EE0005953	GFO-0005953-001	G05953

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:

<b>A9 Information gathering, analysis, and dissemination</b>	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.)
<b>B3.6 Small-scale research and development, laboratory operations, and pilot projects</b>	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.

## Rational for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Planet PV, Inc. to conduct research and development activities for the fabrication and testing of a characterization tool that enables the measurement in three-dimensions of the minority carrier lifetime of semiconducting films. DOE funding would be used to assemble equipment, perform feasibility studies by using model semiconductor systems, and write software.

Laboratory work would be completed at the Molecular Foundry, a DOE funded user facility at the Lawrence Berkeley National Laboratory (LBNL), located at 67 Cyclotron Road, Berkeley, California 94720. Planet PV has completed an R&D questionnaire addressing the protocols for laboratory safety, risk management, chemical handling and waste disposal. The laboratory would comply with standard safety procedures and all processes and procedures are monitored by the Berkeley Lab Waste Management Team (LBNL). All handling and disposal of gases, liquid effluent, toxic waste and chemicals would be executed by LBNL and environmental health and safety (EHS) personnel who comply with appropriate regulations of OSHA. Film fabrication would take place in a fume hood and work involving the pulse laser source would take place in an optics laboratory. Minor laboratory modifications would occur to install two new microscopes. Permits for air, water, and waste are in place and no additional permits would be required.

Based on the review of the project information and the above analysis, DOE has determined the research and development 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 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 :

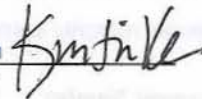
Kelly Daigle 11/2/2012

DOE Share: \$450,000  
Cost Share: \$86,250  
Total Funding: \$536,250

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: \_\_\_\_\_

Electronically Signed By Kristin Kerwin  
NEPA Compliance Officer



Date: 11/2/2012

**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: \_\_\_\_\_