

PMC-EF2a

(2.04.02)

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



RECIPIENT: University of California Los Angeles

STATE: CA

PROJECT TITLE : Development of III-Sb Quantum Dot Systems for High Efficiency Intermediate Band Solar Cells

Funding Opportunity Announcement Number DE-FOA-0000387	Procurement Instrument Number DE-EE0005325	NEPA Control Number GFO-0005325-001	CID Number 0
--	--	---	------------------------

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.

Rational for determination:

DOE is proposing to provide federal funding to the University of California Los Angeles (UCLA) to conduct research and development activities that advance solar photovoltaic (PV) technology. DOE funding would be used to identify suitable candidate materials for III-Sb based quantum dot intermediate band solar cells capable of producing energy conversion efficiencies greater than single junction solar cells.

Project activities would take place at various facilities and laboratories. An R&D questionnaire addressing the protocols in place for laboratory safety, risk management, chemical handling and waste disposal has been completed for each facility where work would be conducted.

All research, prototype fabrication and testing would be conducted in a laboratory environment at: 1) UCLA, 2) Rochester Institute of Technology (RIT) and 3) National Renewable Energy Laboratory (NREL).

UCLA is located at 405 Hilgard Avenue, Los Angeles, California 90095. The facility complies with standard laboratory safety procedures. Labs are inspected by university staff and safety personnel. The safety protocols are monitored by the University's Environmental Health and Safety Offices. All applicable permits are in place to conduct research on campus. Liquid effluents consisting of solvents, acids, bases, chemical reagents and other liquid wastes will be disposed of through the campus Division of Environmental Health and Safety, which picks up waste in approved containers and disposes of it through licensed facilities.

RIT is located at 1 Lomb Memorial Drive, Rochester, New York 14623. The facility complies with standard laboratory safety procedures. Labs are inspected by university staff and safety personnel. The safety protocols are monitored by the University's Environmental Health and Safety Offices. All applicable permits are in place to conduct research on campus. Liquid effluents consisting of solvents, acids, bases, chemical reagents and other liquid wastes will be disposed of through the campus Division of Environmental Health and Safety, which picks up waste in approved containers and disposes of it through licensed facilities.

Material characterization would occur at the National Renewable Energy Lab's (NREL) South Table Mountain campus in Golden, Colorado. NREL complies with standard laboratory safety procedures. Safety protocols are monitored by the Integrated Safety Management System (ISMS) in place. If any liquid effluent contains toxic substances, it would be collected for offsite disposal at a licensed hazardous waste TSDS facility. For all work conducted at DOE laboratories, project activities may be subject to additional NEPA review by the cognizant NEPA Compliance Officer at the lab.

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 operation).

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.

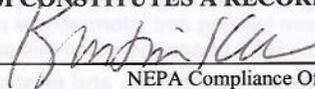
Note to Specialist :

Cristina Tyler 11.28.2011

DOE Funding: \$1,500,000
Total Project Cost: \$1,500,000

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



NEPA Compliance Officer

Date: _____

11/29/2011

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: _____