

PMC-ND

(1.08.09.13)

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



RECIPIENT: Board of Trustees of the Leland Stanford Junior University

STATE: CA

PROJECT TITLE : PVMI Bay Area Photovoltaic Consortium

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-000259	DE-EE0004946	GFO-004946-005	GO4946

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. |
| B3.15 Small-scale indoor research and development projects using nanoscale materials | Siting, construction, modification, operation, and decommissioning of facilities for indoor small-scale research and development projects and small-scale pilot projects using nanoscale materials in accordance with applicable requirements (such as engineering, worker safety, procedural, and administrative regulations) necessary to ensure the containment of any hazardous materials. Construction and modification activities would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). |

Rationale for determination:

The Bay Area Photovoltaic Consortium (BAPVC) is a unique partnership joining universities, industry, and the U.S. Government with the mission of developing advanced technologies to deliver high-performance photovoltaic (PV) modules at low-cost. The Department of Energy (DOE) proposes to provide funding to BAPVC to develop materials, device structures and processes necessary to design and implement manufacturing methods to achieve cost effective photovoltaic modules in large volume production. DOE completed a NEPA review (GFO-0004946-001, CX A9, 6/28/2011) for the initial funding of BAPVC and its related sub-awards. This NEPA review applies to the most recent round of selected sub-awardees, 20 in total, working collaboratively on six individual projects. DOE has reviewed abstracts from each of the following sub-awardees:

I) "Economic silicon heterojunction solar cells with optimized photon management"

California Institute of Technology
 Arizona State University
 Stanford University
 Massachusetts Institute of Technology

II) "High-efficiency n-type CdTe and 1.7 eV MgCdTe double heterostructure PV devices for Si based tandem solar cells"

Arizona State University
 University of Utah
 University of South Florida

III) "Wafer-level processing of Si substrates to improve their material quality and extend ingot yield (as useable wafers/ingot) for very high efficiency solar cells"

National Renewable Energy Laboratory
Georgia Institute of Technology
Lehigh University

IV) "Innovating Module Materials and Metrologies for Reliability of BAPVC Technologies"

Stanford University
Lawrence Berkeley National Laboratory
Stanford University
University of California, Santa Cruz
National Renewable Energy Laboratory

V) "Low Capex Solar Manufacturing Enabled by Perovskite Semiconductors"

Stanford University
Stanford University
Arizona State University

VI) "Network modeling for rapid optimization of Lifetime, efficiency and CapEx of PERC solar cells"

Case Western Reserve University
University of Connecticut

The activities to be completed under the sub-awards may include information gathering, analysis, and dissemination; small-scale indoor research and development projects using nanoscale materials; and small-scale research and development in conventional laboratories. All activities would be conducted in existing offices and operational laboratories and would be in accordance with applicable requirements (such as engineering, worker safety, procedural, and administrative regulations) necessary to ensure the containment of any hazardous materials. Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

Based on the review of the 20 proposed sub-awards, DOE has determined the proposed activities fit within the class of action(s) and the integral elements of 10 CFR 1021 subpart B outlined in the DOE categorical exclusion(s) selected above. DOE has also determined that: (1) there are no extraordinary circumstances (as defined by 10 CFR 1021.410(2)) related to the proposal that may affect the significance of the environmental effects of the proposal; (2) the proposal has not been segmented to meet the definition of a categorical exclusion; and (3) the proposal is not connected to other actions with potentially significant impacts, related to other proposals with cumulatively significant actions, or an improper interim action. This proposal 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.

Insert the following language in the award:

You are required to:

Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

Note to Specialist :

Solar Energy Technologies Office
This NEPA determination requires a tailored NEPA provision.
Review completed by Rebecca McCord 02/22/2017

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



Kristin Kerwin
NEPA Compliance Officer

Date: 2/28/2017

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: _____