

PMC-EF2a

(20402)

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



RECIPIENT: University of Washington

STATE: WA

**PROJECT TITLE :** Combinatorial Platform for Discovery of Nanocrystal-Ink Based Earth Abundant Element PV with Efficiency Greater than 20%

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0000387	DE-EE0005321	GFO-0005321-001	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 (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.

**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).

**Rational for determination:**

DOE is proposing to provide federal funding to the University of Washington to conduct laboratory research and development activities that advance solar photovoltaic (PV) technology. DOE funding would be used to increase CZTS-based thin film PV power conversion efficiency to over 20% by combining techniques that develop new nanocrystal-ink or using molecular-ink solution phase processing techniques.

All research, prototype fabrication and testing would occur in a laboratory environment within the University of Washington (616 NE Northlake Place, Seattle, Washington 98105). The university has completed an R&D questionnaire addressing the protocols in place for laboratory safety, risk management, chemical handling and waste disposal. The facility complies with standard laboratory safety procedures and labs are inspected by university staff and safety personnel. The university operates under all applicable permits to conduct research. Liquid effluents consisting of solvents, acids, bases, chemical reagents, and other liquid wastes will be disposed of by licensed contractors.

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 11.09.2011

DOE Funding: \$492,865  
Total Project Cost: \$492,865

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

NEPA Compliance Officer Signature: *Kristin Lee*  
NEPA Compliance Officer

Date: 11/9/2011

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