PMC-EF2a

(2.04.02)

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

RECIPIENT: Oregon State University **STATE:** OR

PROJECT TITLE : High Flux Microchannel Solar Receiver Development with Adaptive Flow Control

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000595	DE-EE0005801	GFO-0005801-001	

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:

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.
B5.17 Solar thermal systems	The installation, modification, operation, and removal of commercially available smallscale solar thermal systems (including, but not limited to, solar hot water systems) located on or contiguous to a building, and if located on land, generally comprising less than 10 acres within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

Rational for determination:

DOE is proposing to provide federal funding to Oregon State University (OSU) to conduct laboratory research and development activities that advance a microchannel-based solar receiver capable of absorbing high solar flux while using a variety of liquid and gaseous working fluids. DOE funding would be used for simulation, testing and a final demonstration of the prototype on a solar dish concentrator.

The proposed research would focus on demonstrating the capabilities of a microchannel receiver through numerical simulations, validation separate effects experiments and culminating in a field demonstration of a 10 kW, flat microchannel receiver, which would be located at the aperture of the Pacific Northwest National Laboratory's (PNNL) solar dish concentrator. All work would be conducted at PNNL. PNNL has completed an R&D questionnaire addressing the protocols for laboratory safety, risk management, chemical handling and waste disposal. PNNL complies with standard safety procedures and has all applicable permits to conduct research.

For all work conducted at PNNL, 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 B3.6 (indoor bench-scale research and conventional laboratory operation) and B5.17 (solar thermal systems).

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

Cristina Tyler 8.6.2012

DOE Funding: $776,000
Cost Share: $224,000
Total Project Costs: $100,000

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 8/8/2012
NEPA Compliance Officer

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: _____ Date: _____
Field Office Manager