PMC-EF2a

(2.06.02)

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

RECIPIENT: Advanced Energy **STATE:** OR

PROJECT TITLE : Transforming PV Installations Toward Discpatchable, Scheduleable Energy Solutions

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
FOA-0000479	DE-EE0005340	GFO-0005340-001	EE5340

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 Advanced Energy to advance solar photovoltaic (PV) technology. DOE funding would be used to develop and demonstrate power electronic (inverter) technologies that address barriers to high penetration of PV on distribution feeders.

The proposed project would be conducted in two Phases. This NEPA determination applies only to Phase 1. Phase 2 will require additional NEPA review.

Phase 1 would involve gathering data from existing distribution feeders (Portland General Electric on the West coast and PEPCO on the East coast). This data would be used to develop models/simulations to validate the islanding approach/algorithms. The new island detection system would be tested in Advanced Energy's laboratory. Additional models would be developed to simulate and optimize the inverter control methodology. The team would build a scaled version of the system (prototype) and perform lab-scale hardware in the loop testing. The team would also study ramp rate control functions and evaluate the impacts of a battery based storage solution.

Advanced Energy's laboratory is located at 20720 Brinson Boulevard, Bend, Oregon 97701. Safety protocols are established per the Electrical Safety Code NFPA 70E and the OSHA 269 standard for electrical safety in the workplace. Employees exposed to arc flash are issued appropriate gear and lock out tag out equipment. Electrical Safety training is required for anyone entering the area. Each person is trained, monitored and evaluated by the Environmental, Health & Safety (EHS) manager. Test equipment would be connected to individual breakers that are able to safely disconnect power in case of an emergency. The proposed project would not require the use of gases, chemicals or hazardous materials.

Based on this information, DOE has determined the work outlined is consistent with activities identified in categorical exclusion A9 (information gathering) and B3.6 (small-scale research and development activities, laboratory operations and pilot projects).

NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:
Phase 2
This restriction does not preclude you from:
Phase 1
If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

Cristina Tyler 12.12.2011

DOE Funding: $1,500,000
Cost Share: $376,000
Total Project Cost: $1,876,000

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 12/14/2011
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