

PMC-ND

(1.08.09.13)

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



RECIPIENT: Operant Solar

STATE: CA

PROJECT TITLE "A New Remote Communications Link to Reduce Residential PV Solar Costs"

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|-------------------------------|---------------------|------------|
| DE-FOA-0001400 | DE-EE0007592 | GFO-0007592-001 | G07592 |

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.)

B5.15 Small-scale renewable energy research and development and pilot projects Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located 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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Operant Solar to design and develop a communication network device to bi-directionally connect Third Party Owned residential solar sites to the internet.

Activities associated with the proposed project would include the design, fabrication, and field testing of prototype wireless communication devices intended for residential solar installations. Design and fabrication activities would be comprised of hardware, software, and network development tasks to facilitate integration of the technology demonstration elements into a complete single printed circuit assembly (PCA) prototype. Printed circuit board (PCB) fabrication and loading would be performed by one or more contract manufacturers. Design, development, top level assembly (above the PCB level), testing, and repair of PCA units would be performed in-house by Operant Solar in Santa Rosa, CA. Following lab testing, a field trial of a network of 20 units would be conducted in a representative residential neighborhood in Santa Rosa, CA. The specific locations of the 20 field test sites have not yet been determined and would be selected later in the course of the proposed project.

Outdoor testing and pre-commercial scale demonstration activities would involve working with industry partners to identify and obtain access to established solar customer sites with spacing matching typical residential solar densities, interfacing to partner software tools and internet access protocols, and supporting product application software in field locations. The only proposed outdoor work that would require installation at residential sites is subtask 2.6. Prior to this activity, short-term (<5 minutes) outdoor range experiments would be performed including line-of-sight tests with hand-held instruments and on-car drive testing for residential range (subtask 1.6).

Installation of equipment in parallel with pre-existing site communications at unspecified residential properties would require attaching a small (2 inch square) wireless device to the side of each home with wood screws and connecting it to in situ solar power equipment with three low voltage wires and signal cables (approximately 6 feet). Additional physical modifications, ground disturbance, or construction debris are not anticipated at these sites. The recipient is restricted from carrying out installations on or within buildings of historic, archaeological, or architectural significance designated by federal, state, or local governments, property located within or immediately adjacent to a historic district, property 50 years or older, or property eligible for listing on the National Register of Historic Places without first providing additional property details to the DOE Project Officer and awaiting approval from DOE to move ahead with those installations.

No hazardous materials would be utilized by the proposed project. Operant Solar would eventually remove the prototype communications devices and return them to their lab facility for evaluation. The total weight of all 20 devices would be less than one pound, and after evaluation they would be disposed via a local electronics recycling program.

Based on the review of the proposal, DOE has determined the proposal fits 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:

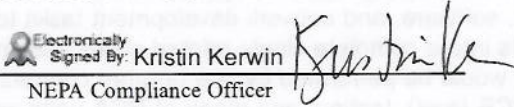
You are required to:

The recipient is restricted from carrying out modifications or installations on or within buildings of historic, archaeological, or architectural significance designated by federal, state, or local governments, property located within or immediately adjacent to a historic district, property 50 years or older, or property eligible for listing on the National Register of Historic Places without first providing additional property details to the DOE Project Officer and awaiting approval from DOE to move ahead with those modifications and installations.

Note to Specialist :

Solar Energy Technologies Office
This NEPA determination requires a tailored NEPA provision.
Review completed by Whitney Doss on 07/25/16

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Date: 7/26/2016
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