

PMC-ND  
(1.08.09.13)

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



RECIPIENT: Sunvapor, Inc.

STATE: CA

PROJECT  
TITLE : Green Parabolic Trough Collector

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-00001268	DE-EE0007343	GFO-0007343-002	G07343

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:

<b>A9 Information gathering, analysis, and dissemination</b>	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.)
<b>B3.11 Outdoor tests and experiments on materials and equipment components</b>	Outdoor tests and experiments for the development, quality assurance, or reliability of materials and equipment (including, but not limited to, weapon system components) under controlled conditions. Covered actions include, but are not limited to, burn tests (such as tests of electric cable fire resistance or the combustion characteristics of fuels), impact tests (such as pneumatic ejector tests using earthen embankments or concrete slabs designated and routinely used for that purpose), or drop, puncture, water-immersion, or thermal tests. Covered actions would not involve source, special nuclear, or byproduct materials, except encapsulated sources manufactured to applicable standards that contain source, special nuclear, or byproduct materials may be used for nondestructive actions such as detector/sensor development and testing and first responder field training.

**Rationale for determination:**

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Sunvapor, Inc. to demonstrate that a single-axis concentrating parabolic trough collector (PTC) meets the Concentrating Optics for Lower Levelized Energy Costs (COLLECTS) cost-to-performance ratio of 0.91 and a lifetime greater than 30 years.

A previous NEPA determination (GFO-0007343-001, A9, April 8, 2016) was completed for Task 1 of this project authorizing concept and prototype design. A location for assembly and field testing was not known at the time; therefore, Tasks 2 and 3 were prohibited. Since that time the Statement of Project Objectives was re-organized and Task 3 was absorbed into Task 2. Additionally, a location has now been chosen making it possible to complete a meaningful review of the activities associated with the new Task 2.

The remaining project activities would include analytical activities, assembly and field testing of a prototype PTC. Analytical activities would take place at the Sunvapor research and development office in Livermore, CA. Prototype assembly and field testing would be completed at an outdoor testing site in Firebaugh, CA for a period of one year.

The PTC would be assembled in an agricultural zone on one acre of land at the far corner of a 400-acre nut processing plant in Firebaugh, CA. Helical piles (which are temporary/removable) would be used for this installation instead of a concrete foundation. Some clearing of weeds may be necessary, but no excavation would be required. Land disturbance would be minimal and existing roads would be used to access the project location. No change in the use, mission or operation of existing facilities would arise out of this effort. The facility has all applicable permits in place, and would not need additional permits for the proposed activities.

Proposed activities would necessitate the use of approximately 17 gallons of paint, one ton of lumber, 1500 gallons of demineralized water, and 50 gallons of Duratherm 450 (heat transfer fluid). Duratherm 450 is environmentally friendly, non-toxic, non-hazardous, and non-reportable. It poses no hazards to worker safety and does not require special handling. Wastes generated by the proposed activities would be limited to empty paint cans and brushes and packaging type materials. Duratherm 450 will be put back into the original containers and reused for other projects. Lumber will be recycled. All other wastes would be disposed of through normal municipal waste streams.



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.

Note to Specialist :

Solar Energy Technologies Office

This NEPA determination does not require a tailored NEPA provision.

Review completed by Rebecca McCord on 4/28/2017

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

NEPA Compliance Officer Signature:



Casey Strickland

*Casey Strickland*

Date:

5/4/2017

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:

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Field Office Manager

Date:

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