

PMC-ND  
(1.08.09.13)

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



RECIPIENT: Nevados Engineering, Inc.

STATE: CA

**PROJECT TITLE :** Installation and Soft Cost Reduction for Horizontal Single Axis Trackers

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0001400	DE-EE0007859	GFO-EE0007859-001	

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:

<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>B3.6 Small-scale research and development, laboratory operations, and pilot projects</b>	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.
<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 Nevados Engineering, Inc. to develop, fabricate, and field-test a solar horizontal single axis tracker (HSAT) that provides options for installation on level, sloped, and rolling terrain. A previous SunShot award (DE-EE0007188) supported earlier work on the HSAT design. In the proposed pilot-scale project, Nevados would refine the current structure and validate components through additional testing in order to optimize the design for manufacturing.

Some activities within the scope of the proposed project's application were approved by DOE for pre-award cost reimbursement. These include design, modeling and development work taking place in Nevados office space, in addition to site preparation at the existing, permitted solar equipment testing facility where Nevados previously conducted HSAT development work as part of award DE-EE0007188. Nevados was authorized to incur pre-award costs for certain site-based activities related to the previous project, which are considered to be within the scope of work reviewed by DOE in the NEPA Determination for that award (GFO-0007188-001; A9, B3.6, B3.11; 9/9/2015).

Proposed project activities would include the design, development, fabrication and field testing of a HSAT equipment. Computer-based design, prototype development, and lab testing would occur at the Nevados office in San Francisco, CA. Development and fabrication activities would take place at the Nevados office and/or at the locations of third-party solar contractors: Gemin Fabrication in Oakland, CA; Eclipse Metal Fabrication in Redwood City, CA; P4Q in Albuquerque, NM; SMTC in San Jose CA; and potentially other commercial locations yet to be determined. No change in the use, mission or operation of existing offices and manufacturing facilities would arise out of this effort.

Demonstration activities would take place at the PV Evolution Labs (PVEL) solar equipment testing facility in Davis,

CA. The PVEL outdoor test facility is located on five acres within an existing 90-acre commercially operating solar power plant with access granted through membership agreement. Nevados would operate an outdoor test site at PVEL to install and test HSAT structure and controls. The facility has all applicable permits in place, and would not need additional permits for the proposed activities. No physical modification of existing facilities would be required, and equipment would be brought to the test site on existing roads. Field tests would involve a 4 row system of panels with 60 foot rows spaced 18 feet apart. Ground disturbance would be limited to driving up to 38 4" by 6" steel I-beams into the ground at depths of up to 6 feet. This type of installation has been performed before at the PVEL facility. The actual site that would be employed for the proposed project was previously leveled flat and has been prepared by PVEL for solar technology research in advance of the proposed project. The facility being proposed for the completion of demonstration activities was previously built and permitted for the type of activities being proposed; therefore, no adverse impacts to sensitive resources are expected as a result of the proposed project.

The proposed project would involve the use and handling of heavy steel components and electrical generation equipment. All handling would be reviewed and approved by an electrical engineer and mechanical engineer to identify appropriate handling methods and procedures for installation, operation and disassembly. Any hazardous materials that might be deemed necessary (i.e. galvanization paint) would be managed in accordance with federal, state and local environmental regulations. Nevados would follow existing corporate health and safety policies and procedures in accordance with Nevados internal policy and PVEL site policy when performing work at the PVEL site. Nonhazardous waste expected during shipping and construction of the test site would be limited to wood, cardboard, paper, plastic and metal packaging required for shipping the components to site. These materials would be disposed of through regular recycling and waste disposal as appropriate. No siting, construction or major expansion of waste storage, disposal, recovery, or treatment actions/facilities would be required. Upon decommissioning, the equipment and materials used by the project would either be recycled, transported back to Nevados offices for reuse, or left in place for use by PVEL for further testing.

Based on the review of the proposal, DOE has determined the proposal fits within the class of action(s) and the integral elements of Appendix B to Subpart D of 10 CFR 1021 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.  
NEPA review completed by Whitney Doss, 1/10/17

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

NEPA Compliance Officer Signature:



Casey Strickland

*Casey Strickland*

Date:

1/19/2017

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: \_\_\_\_\_  
Field Office Manager

Date: \_\_\_\_\_