

PMC-ND

(1/08/09:13)

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



RECIPIENT: Norwich Technologies

STATE: VT

PROJECT TITLE : Second Generation Novel High Temperature Commercial Receiver & Low Cost High Performance Mirror Collector for Parabolic Solar Trough

Funding Opportunity Announcement Number **Procurement Instrument Number** **NEPA Control Number** **CID Number**
 DE-FOA-0000923 DE-EE0006687 GFO-0006687-001

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:

- | | |
|---|--|
| 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. |

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to Norwich Technologies to develop a more efficient receiver for trough-based concentrating solar power (CSP).

The proposed project activities would consist of design, fabrication and testing of a CSP receiver prototype and associated solar trough prototype. Norwich Technologies would partner with Creare, Gossamer Space Frame, and Dartmouth College to complete project objectives. Outdoor testing of the four meter by four meter prototype CSP unit would occur in an existing paved parking lot adjacent to Norwich's White River Junction, VT facility for a duration of three months. The Norwich building and parking lot are located in a commercial area separated from other buildings by trees and three railroad lines to the south and west and more trees and the White River to the north and east, therefore, visual impacts are not expected as a result of the proposed project. A small amount of Nickel nanoparticles would be used for the solar selective coating on the prototype receiver. The coating on the receiver would be applied by the Thayer School of Engineering at Dartmouth College in an established laboratory facility following Environmental Health and Safety (EH&S) policies with all waste handling conducted in accordance to standard nanoparticle waste stream processes and all local, state and federal regulations. No new construction, modifications or new permits, additional licenses and/or authorizations are required as result of the proposed project.

Based on review of the project information and the above analysis, DOE has determined the proposed project would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined that this project is consistent with actions outlined in DOE categorical exclusions A9 "Information gathering, analysis, and dissemination" and B3.6 "Small-scale research and development, laboratory operations, and pilot projects" and is therefore 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 you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Review completed by Logan Sholar on 09/08/14.

This NEPA Determination does not require a tailored NEPA provision.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By Kristin Kerwin Date: 9/9/2014
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