

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Combined Power LLC, dba Hyperlight Energy**STATE:** CA**PROJECT TITLE:** Linear Fresnel Reflector

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001268	DE-EE0007342	GFO-0007342-002	GO7342

**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.)
- B5.17 Solar thermal systems** The installation, modification, operation, and removal of commercially available smallscale solar thermal systems (including, but not limited to, solar hot water systems) located on or contiguous to a building, and if located on land, generally comprising less than 10 acres 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 Hyperlight Energy to develop high-performing, low-cost equipment for a linear Fresnel reflector (LFR) type concentrated solar power (CSP) applications. Activities associated with the proposed project would include design, development, fabrication, and field testing of CSP equipment. Outdoor testing would occur once during each of the three phases associated with this project at increasing scales.

A previous NEPA determination covered Tasks 1 through 3 which corresponds to Budget Period 1 (BP1) (GFO-0007342-001, A9, B5.17, 5/19/2016). This NEPA determination would cover Tasks 4 and 5, which corresponds to BP2.

For BP2 a pilot LFR CSP system would be constructed at an existing field test site at San Diego State University's satellite campus in Brawley, CA. The existing system would be re-configured from its current east-west configuration to a north-south configuration and would be expanded to 1/2 acre on the approximately 1 acre site. All land at the site is previously disturbed either by farming, research & development (R&D), or both. Approximately 1/2 acre would be returned to active farming at the end of the project while approximately 1/2 acre would be removed from farming and put into R&D use as part of changing the over-all configuration of the site. Additional project activities would include tech-to market activities such as business development and strategic planning.

The proposed activities would involve the use and handling of high-temperature thermal oil. This is a standard material used in CSP as a heat transfer fluid and would be contained in closed systems. Existing health and safety policies and procedures would be followed including use of employee training, personal protective equipment, engineering controls, monitoring, and internal assessments to mitigate this hazard.

All prototype LFR CSP units to be tested rest on the ground and are self-ballasted and the CSP receivers would use a concrete spread footing. No ground penetration would be required. A building permit for the LFR CSP installation was obtained from San Diego State University. It was determined by the university that this project is exempt from CEQA review. Due to the previously disturbed nature of this site and small footprint of this field test, the DOE has concluded that no impacts to sensitive cultural and/or natural resources such as historic properties, threatened/endangered species, migratory birds, wetlands, floodplains, or prime farmlands are to be expected.

The location for Tasks 6 and 7 activities has not yet been determined, therefore DOE cannot complete a meaningful review of these tasks. DOE will complete additional NEPA review for these two tasks when a detailed proposal for

these tasks is provided.

Based on the review of the proposal, DOE has determined that Tasks 4 and 5 fit 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. Tasks 4 and 5 are categorically excluded from further NEPA review.

#### 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:

TASK 6: Pilot 2 –Field Deployment Process Validation  
TASK 7: Phase 3 Technology-to-Market

This restriction does not preclude you from:

TASK 4: Pilot 1 - Brawley Site Plant Process Development and Evaluation  
TASK 5: Phase II Technology-to-Market

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 :

Solar Energy Technologies Office  
This NEPA determination requires a tailored NEPA provision.  
Review completed by Chris Rowe on 6/13/2017

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

NEPA Compliance Officer Signature: \_\_\_\_\_



Kristin Kerwin  
NEPA Compliance Officer

Date: 6/15/2017

#### 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: \_\_\_\_\_