

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 : Low Cost Concentrated Solar Power (CSP) Collector

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001268	DE-EE0007342	GFO-0007342-003	

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 for the design, development, installation, and field testing of equipment for a linear Fresnel reflector (LFR) concentrated solar power (CSP) collector. Previous NEPA determinations reviewed Tasks 1 through 3 (GFO-0007342-001; CXs A9, B5.17; 05/19/2016) and Tasks 4 and 5 (GFO-0007342-002; CXs A9, B5.17; 06/5/2017). This NEPA determination is to review Tasks 6 and 7, which correspond to Budget Period (BP) 3.

Some of the activities that were previously approved under BP2 would be shifted into BP3. These would include the reconfiguration of the existing LFR CSP system at sub-recipient San Diego State University's (SDSU) satellite campus in Brawley, CA from its current east-west configuration to a north-south configuration. This reconfiguration would take place on the same one acre, dedicated research and development (R&D) site that was used for previous equipment installation activities under this award. All land at the site is previously disturbed either by farming, (R&D), or both. Approximately ¼ acre would be returned to active farming at the end of the project while approximately ¼ acre would be removed from farming and put into R&D use as part of changing the over-all configuration of the site.

Tasks 6 and 7 would involve pilot deployment of the LFR CSP collector, which has been down-scoped to the aforementioned rearrangement of existing CSP equipment plus the installation of accessory hardware required to reconfigure the existing system and temporarily utilize the heat generated by the system in a novel field test (described below). The proposed work would not include any expansion of the CSP system. Associated activities would include thermal energy distribution system integration (i.e. connection of the LFR CSP collector to a separate biomass processing system), field testing of CSP equipment, evaluation/modelling of cost and performance metrics, process validation, site/equipment characterization, development of a post-installation check-out plan, and thermal plant performance evaluation.

Heat energy produced by the LFR CSP system would be used in a separate pilot-scale hydrothermal processing (HTP) system. The HTP system was built as a result of a partnership between Southern California Gas Company (SCG), Hyperlight Energy, Genifuel Corporation, and the National Renewable Energy Laboratory (NREL). This unrelated project has received funding from SCG, the California Energy Commission, and the DOE. Because the two R&D projects would be co-located on the same site, it has been proposed the HTP system would receive heat energy from the LFR CSP collector via a simple heat exchange system. The HTP system would nonetheless operate independently, as it could function fully without CSP heat, and the overall objectives of this project would remain the same in terms of field testing the CSP system. No new construction, excavation, or other ground disturbing activities would be necessary to perform the proposed short-term integration. DOE has determined that the HTP system has

independent utility, is not a connected action, and is therefore not further analyzed in this NEPA Determination.

All project activities would take place at Hyperlight Energy's R&D facilities in Lakeside and SDSU's Brawley campus. Installation and reconfiguration of pilot equipment would be limited to the Brawley site, as described above. 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. No other changes in the use, mission or operation of existing facilities would arise out of this effort. Both sites are purpose-built for the type of activities being proposed. 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 expected.

The proposed project would involve the use of a high temperature thermal oil (Exceltherm 600). Thermal oil is a standard material used in CSP projects as a heat transfer fluid and would be contained in closed systems. Both Hyperlight Energy and SDSU would adhere to existing corporate health and safety policies and procedures, including employee training, use of proper protective equipment, engineering controls, monitoring, and internal assessments. All waste would be disposed of in accordance with applicable local, State, and Federal regulations.

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.

Review completed by Jonathan Hartman on 6/19/2018

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically
Signed By: Kristin Kerwin
NEPA Compliance Officer

Date: 6/20/2018

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: _____