

PMC-ND

(1.08.09.13)

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

**RECIPIENT:**Energetics Incorporated**STATE:** CO**PROJECT TITLE** : Solar Decathlon Program Administrator

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-EE0001371		GFO-0007353-002	

**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:

- B1.22 Relocation of buildings** Relocation of buildings (including, but not limited to, trailers and prefabricated buildings) to an already developed area (where active utilities and currently used roads are readily accessible).
- B3.14 Small-scale educational facilities** Siting, construction, modification, operation, and decommissioning of small-scale educational facilities (including, but not limited to, conventional teaching laboratories, libraries, classroom facilities, auditoriums, museums, visitor centers, exhibits, and associated offices) within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Operation may include, but is not limited to, purchase, installation, and operation of equipment (such as audio/visual and laboratory equipment) commensurate with the educational purpose of the facility.

## Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Energetics, Inc. to carry out Solar Decathlon 2017. The Solar Decathlon encourages collegiate teams from around the world to design, build, and operate solar-powered houses that are cost effective, energy-efficient, and attractive.

The Solar Decathlon is a two-year program that culminates with an on-site competition between each university team that submits a home. The first year is centered on design while the second year involves materials selection, construction and fundraising. After construction is completed on-campus, the houses are disassembled and transported to the event site where they are reassembled and made ready for the competition. The winner of the competition is the team that best blends affordability, consumer appeal, and design excellence with optimal energy production and maximum efficiency. The winning team would be awarded a \$300,000 prize. After the competition is over the teams and organizers have five days for disassembly. Competition participants include:

- École Polytechnique Fédérale de Lausanne (Lausanne, Switzerland)
- Embry-Riddle Aeronautical University (Joint Base Andrews, MD)
- HU University of Applied Science Utrecht (Utrecht, Netherlands)
- Missouri University of Science and Technology (Rolla, Missouri)
- Northwestern University (Evanston, Illinois)
- University of Alabama at Birmingham (Birmingham, Alabama)
- University of California at Berkeley (Berkeley, California)
- University of California, Davis (Davis, California)
- University of Maryland (College Park, Maryland)
- University of Nevada, Las Vegas (Las Vegas, Nevada)
- Washington University (St. Louis, Missouri)
- Washington State University (Pullman, WA)
- West Virginia University (Morgantown, West Virginia)

The project plan has been broken down into two Budget Periods (BP). BP1 pertains to Solar Decathlon 2017 (SD17) and BP2 pertains to Solar Decathlon 2019 (SD19). A previous NEPA review was completed for Tasks 1 and 2 of BP1 (GFO-0007353-001, CX: A9, May 2, 2016) in order to authorize Energetics' project management and planning activities. This review applies to the remaining tasks for SD2017, Tasks 3 (implementation) and 4 (close out) of BP1.

Activities proposed to be carried out by each team include construction of a 1,000-square-foot home on surface-mounted footings, without excavation or soil disturbance. The homes would then be disassembled and transported to

the competition site at the Pena Blvd. light rail stop in Denver, CO. This competition site is a previously developed parcel of land with roadways, major utilities, and other infrastructure already installed. In addition to the competition homes, there would also be an exhibition pavilion tent, an education center tent, and a service tent erected. The competition site would be enclosed in fencing with restricted access. The teams would have 10 days to assemble the structures and the structures would stand for 10 more days while the event is open to the public. It is estimated that 50,000 or more individuals will visit the site throughout the course of the competition. At the conclusion of the competition the homes would be disassembled and taken back to their home campuses.

The construction of each home would take place on college campuses, or other land owned and operated by each university listed above; therefore, all construction activities would be subject to established environmental health and safety EHS protocols at their respective universities. This would include training on the proper use of personal protective equipment, and qualification of all employees through OSHA training programs. Minimal quantities of chemicals and other building materials would be used during construction of the small house, and all required building permits such as mechanical, electrical, structural, zoning, and temporary occupational use and local building permits would be attained prior to beginning construction. All associated inspections would be completed as required. Excess construction materials would be recycled or reused as possible, and materials unable to be recycled would be disposed of in accordance with all appropriate local guidance.

At the competition site safety oversight would be provided by the competition organizers (Energetics Inc. and MC2) with stop-work authority and the ability to educate, inform, and correct actions taken by university teams and organizer subcontractors. Risks would be mitigated in accordance with best practices for residential construction. Potential hazards include use of power tools, electricity, lifts, falls, and other similar hazards. To mitigate those risks as much as possible, each team would be required to work with their university safety representatives, complete a 30-hour OSHA training, and develop a team-specific health and safety plan. Emissions associated with vehicular traffic and minimal generator use, as well as trace quantities of gases and particulates generated by this project are expected to have a negligible overall impact. All visual, socioeconomic, employment, or transportation impacts would be temporary. The public exhibit would host a large number of public visitors and, as such, may result in some changes to local traffic patterns for the 10 day duration of the public event. No additional capacity would be required and visitors would be easily accommodated with current facilities, roads, and available parking.

Waste generated by the Solar Decathlon site would include waste refuse and trash. A waste contractor would be appointed as waste management and recycling supplier. Recycling will take place in accordance with local and state laws, with trash sorting either taking place at source (i.e. separate bins for trash, compost or recycling) or will be sorted off site, post collection. Portable toilets will be used at the site, and all waste will be disposed in accordance with local laws and best practices.

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 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:

All Tasks in Budget Period 2

This restriction does not preclude you from:

All Tasks in Budget Period 1

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 :

Office of Strategic Programs  
This NEPA Determination requires a tailored NEPA provision.  
Review completed by Rebecca McCord, May 15, 2017

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

NEPA Compliance Officer Signature:  Electronically Signed By: Kristin Kerwin \_\_\_\_\_ Date: 5/15/2017  
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: \_\_\_\_\_ Date: \_\_\_\_\_  
Field Office Manager