

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



RECIPIENT: SolarFlexes LLC

STATE: CT

PROJECT TITLE : Smart, Hardened, Modular PV System for 50-Year Life

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|-------------------------------|---------------------|------------|
| DE-FOA-0002378                          | DE-EE0009828                  | GFO-0009828-001     |            |

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), 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.

**B3.11  
Outdoor tests  
and  
experiments  
on materials  
and  
equipment  
components**

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 SolarFlexes LLC. for the design, development, fabrication, bench testing, and field testing of a modular, prefabricated photovoltaic (PV) array and anchoring system. Design, development, and fabrication activities would occur at SolarFlexes manufacturing facility in Los Angeles, California. Industry-standard transportation and anchor testing would occur at accredited test lab sites. On-road transportation and field testing of the modular PV array would occur at the National Renewable Energy Laboratory's (NREL) Flatirons Campus and a yet to be determined Mississippi Army National Guard (MSARNG) site. Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

Project activities are divided into two budget periods (BP). BP1 includes MSARNG site selection; design and laboratory testing of the anchoring system; installation and removal of an approximately 100 kW array to assess cost, ease of installation, and anchor system at Flatirons Campus; design, manufacture, and testing of the prefabricated modular array for transportation within a standard 53-foot trailer; and cost analyses. In BP2, transportation testing per military standard and a pilot installation of a 100 kW modular array would be completed. SolarFlexes would work with the Department of Defense (DOD) to determine the specific field test site that complies

with both Recipient and DOD requirements.

Project work includes manufacturing activities that would occur within existing facilities designed for this type of work that would utilize existing equipment; therefore, no modifications, new permits, additional licenses and/or authorizations would be necessary. Milling, cutting, and assembly hazards associated with a manufacturing environment would be mitigated by compliance with internal health and safety, local fire code, and OSHA standards. An approximately 100 kW PV array would be installed on approximately 0.25 acres using earth anchors set at a depth of 5-7 feet at two sites (NREL and MSARNG). The array would be removed within two weeks of installation. Each field test would comply with all NREL and MSARNG environmental, health, and safety requirements and any required permits would be obtained prior to beginning installation. All wastes would be handled following appropriate methods and disposed of in accordance with applicable regulations. Based on the above, DOE does not anticipate any impacts to resources of concern due to the proposed activities of the project.

## NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

Prior to installation, the Recipient must notify the DOE Project Officer of the selected Budget Period 2 field installation assessment site location once stakeholder commitment has been secured.

Notes:

Solar Energy Technologies Office  
This NEPA determination requires a tailored NEPA provision.  
Review completed by Casey Strickland, 12/22/2021

## FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

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

NEPA Compliance Officer Signature:

 Electronically  
Signed By: Kristin Kerwin  
NEPA Compliance Officer

Date: 12/23/2021

**FIELD OFFICE MANAGER DETERMINATION**

- Field Office Manager review not required
- Field Office Manager review required

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: \_\_\_\_\_  
Field Office Manager

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