

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



RECIPIENT: RCAM Technologies, Inc.

STATE: CO

PROJECT TITLE : A Low-Cost Jack-Up Solar Platform to Conserve America's Water

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0003057	DE-EE0011416	GFO-0011416-001	GO11416

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.)

B5.15 Small-scale renewable energy research and development and pilot projects

Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located 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 RCAM Technologies, Inc. to develop and test a commercially viable jack-up canal solar platform prototype. The proposed project would adapt 3D concrete printing for the purposes of mounting solar panels onto frames placed over irrigation canals to generate renewable energy and save water by reducing evaporation.

Project activities would include the design, analysis, fabrication, assembly, and proof-testing of an operational canal solar prototype structure. These activities would be performed at RCAM's research and development (R&D) facility in Los Angeles, CA, and 3D printing facility in Bergen, NY. RCAM would assemble, install, and operate the prototype canal solar system in an outdoor space (on land) located at AltaSea at the Port of Los Angeles, a dedicated incubator workspace for ocean R&D startups. The proposed activities are aligned with the permitted operations of each project location. No modifications to existing permits, or new permits, licenses, or authorizations would be required to perform project work. No change in the use, mission, or operation of existing facilities would arise out of this effort.

The canal solar prototype (up to 30 feet [ft] wide by 30 ft long x 10 ft tall) would be temporarily installed and operated outdoors for at least 30 days. The AltaSea site on which the prototype would be installed is in an existing paved parking lot. The solar panels would be connected to a battery bank for charging and would not be connected to the site's electric grid. The prototype would be installed on six footings that may be bolted into the pavement surface using anchor bolts drilled down to 18 inches into the ground. An alternative design may utilize concrete footings that would rest on top of the pavement. The structure would be disassembled and recycled upon completion of the project, and the solar panels and electrical equipment would be retained for future R&D use.

The proposed project would involve the use and handling of materials such as cement which is considered a hazardous material by OSHA Hazard Communication Standard (29 CFR 1910.1200). All such handling would occur in a controlled laboratory environment following proper hazardous material handling and disposal practices. The prototype fabrication and assembly activities would involve use of 3D concrete printing equipment, forklifts, and cranes. Existing corporate health and safety policies and procedures would be followed, including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments.

DOE has considered the scale, duration, and nature of the proposed activities to determine potential impacts on sensitive resources, including those of a biological, ecological, cultural, and socioeconomic nature. DOE does not anticipate impacts on these resources which would be considered significant or require DOE to consult with other agencies or stakeholders.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Solar Energy Technologies Office (SETO)
Review completed by Whitney Donoghue on 7/2/2024.

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:  _____ Date: 7/9/2024
NEPA Compliance Officer

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: _____ Date: _____
Field Office Manager