

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



RECIPIENT: RCAM Technologies, Inc.

STATE: CO

PROJECT TITLE: A Versatile Additive Manufacturing Platform for Fabricating Low-Cost, Concrete Offshore Wind Support Structures in American Ports

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002960	DE-EE0011010	GFO-0011010-001	GO11010

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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to RCAM Technologies, Inc. for the design, assembly, and testing of a large-scale concrete additive manufacturing platform (AMP) that would be capable of automated spraying, extrusion, and surface finishing of concrete components for floating offshore wind projects.

The award would be limited to intellectual and laboratory-scale activities. The proposed activities would include design and prototyping of subscale additively manufactured concrete suction anchors and floating foundation sections. Additional activities include concrete material specimen preparation. These activities would be performed at RCAM's Research and Development Facilities in Los Angeles, California, and Bergen, New York. Additional concrete materials testing for mechanical properties and marine durability would be performed at Tufts University in Medford, Massachusetts. Geotechnical testing of anchor prototypes would be performed at University of California, San Diego at La Jolla, California in existing laboratories. Other project partners' activities would occur at Texas A&M University in College Station, Texas, WSP USA in Seattle, Washington, Verdical Group in Los Angeles, California, and EarthEcho International in Washington, DC and would be limited to intellectual, academic, or analytical activities.

Potential emissions at the RCAM Technologies, University of California and Tufts University laboratories include greenhouse gas emissions, particulate matter, and airborne pollutants resulting from the operation of a propane forklift. The RCAM site in San Diego, California is within a USEPA Nonattainment area for 2 National Ambient Air Quality Standard pollutants. Based on the nature and extent of the proposed work, emissions associated with this award are not expected to significantly impact air quality. No emissions are expected from the remaining five sites, where award efforts would be limited to intellectual, academic, or analytical activities.

The project would involve the use and handling of materials such as cement, concrete, and liquid concrete additives, in a laboratory environment. All such material handling would occur within designated laboratories, and current hazardous material handling and disposal practices would be adhered to. All hazardous materials and equipment would be managed in accordance with federal, state, and local environmental regulations. Existing corporate health and safety policies and procedures would be followed, including employee training, proper protective equipment, engineering controls, monitoring, injury and illness prevention plans, chemical hygiene plans and internal assessments. Additional policies and procedures would be implemented as necessary as new health and safety risks are identified.

All award-related work would be performed at existing, purpose-built facilities, with no modification of the existing facilities, ground disturbances, changes in use of facilities or outdoor equipment installations. No additional permits, licenses, or authorizations would be required. DOE does not anticipate any impacts to resources of concern due to the proposed award activities.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Advanced Materials and Manufacturing Technologies Office
NEPA review completed by Chris Akios, 05/06/2024

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: 5/9/2024
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