

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Global Algae Innovations**STATE:** CA

PROJECT TITLE: Production of Algae Biofuel and Bioproducts with CO2 Direct Air Capture

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002023	DE-EE0009272	GFO-0009272-001	GO9272

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 Global Algae Innovations (GAI) to improve delivery of CO2 through direct air capture and increase quality of algae through strain improvements.

GAI would cultivate algae strains at its preexisting facilities in Kauai, Hawaii. The Kauai Algae Facility (KAF) is an algae cultivation and processing facility. Algae cultivation utilizes existing outdoor raceways, water from the Lihue ditch, and commercial agricultural fertilizers. GAI has previously received DOE funding which included cultivation at KAF, and for which NEPA reviews and determinations were completed. Work under this DOE Cooperative Agreement is substantially similar to work reviewed previously. (See, for example, GFO-00007092, GFO-000076889, GFO-00007965, GFO-00008121, and GFO-00008516).

Algae cultivated at KAF will then be processed at GAI's laboratory in Kauai and/or at Neste Corporation in Finland. Processing would include drying and extracting oil and algae meal from the algae. Production could include up to 100 liters oil for fuel conversion, 40 liters oil for aquaculture, and 60 kg of algae meal. Production of these products would occur in preexisting indoor laboratory facilities. No new permits or changes to facilities would be required for this process.

Once produced oils would be analyzed by GAI in Kauai, Neste, in Finland, and Algenesis Materials in La Jolla California. Analysis would be conducted at indoor laboratories that regularly engage in this type of work.

Oils and algae meal would also be used to perform shrimp and fish feeding trials at Ziegler Aquaculture Research Laboratory at Florida Atlantic University in Fort Pierce, Florida, and at Hubbs-Sea World Research Institute in San Diego and Carlsbad, California.

Work at all laboratory and research facilities will follow existing corporate and University health and safety procedures.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Bioenergy Technology Office

This NEPA determination does (does not) require a tailored NEPA provision.

Review completed by Roak Parker, 11/13/2020

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.

DOE has determined that work to be carried out outside of the United States, its territories and possessions is exempt from further review pursuant to Section 5.1.1 of the DOE Final Guidelines for Implementation of Executive Order 12114; "Environmental Effects Abroad of Major Federal Actions."

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:



NEPA Compliance Officer

Date: 11/13/2020

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: