

PMC-ND

(1.08.09.13)

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



RECIPIENT: Global Algae Innovations Inc.

STATE: CA

**PROJECT TITLE** : DEVELOPMENT OF ALGAL BIOMASS YIELD IMPROVEMENTS IN AN INTEGRATED PROCESS

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0001471	DE-EE0007689	GFO-0007689-001	

**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:

- 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 federal funding to Global Algae Innovations Inc. (GAI) to facilitate development of the commercial algae biofuel industry, by improving algae cultivation and strain development. All approaches and experimental results would be passed through a Techno-Economic Analysis/Life Cycle Analysis model so that the economic viability and sustainability impacts are documented.

The proposed project activities would include operation of an algae farm for cultivation and harvesting of algae at the existing GAI facility in Lihue, HI. Analytical testing and laboratory experiments would occur at the following laboratories: GAI Kauai Algae laboratory also in Lihue, HI, University of California- San Diego and the Scripps Institution of Oceanography both in La Jolla, CA, Texas A&M University in College Station, TX and Pacific Northwest National Laboratory in Richland, WA. The work at these facilities would include characterization, lipid content, ash free dry weight, nutrient take-up, inoculum generation, and flow cytometry for cell sorting for the various algae. Additionally, computer modeling and paper studies would be conducted at the GAI Corporate Headquarters in El Cajon, CA and the National Renewable Energy Laboratory in Golden, CO.

The proposed project would involve the use and handling of various hazardous materials at each laboratory facility. All such handling would occur in the laboratories in a controlled environment and all of the proposed techniques are currently approved for use at those locations. All hazardous materials would be stored, transported, and disposed of according to federal, state, and local regulations, and in accordance with each facility. All the laboratory facilities have all applicable permits in place, and would not need additional permits, licenses, or authorizations for the proposed activities.

None of the sites for this project would make any physical modifications of existing facilities, construct new facilities, perform any ground disturbing activities, change the use, mission, or operation of any existing facilities, or install equipment outdoors. Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

Based on the review of the proposal, DOE has determined the proposal fits within the class of action(s) and the integral elements of Appendix B to Subpart D of 10 CFR 1021 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 final NEPA determination for this award

Insert the following language in the award:

If the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.

Insert the following language in the award:

You are required to:


Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

Note to Specialist :

Bioenergy Technologies Office  
This NEPA determination requires a tailored NEPA Provision.  
NEPA review completed by Diana Heyder, 09/06/16

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

NEPA Compliance Officer Signature:

 Electronically Signed By: Kristin Kerwin  
NEPA Compliance Officer

Date: 9/9/2016

**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:

Field Office Manager

Date: