

PMC-ND

(1.08.09.13)

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



RECIPIENT: BioProcess Algae

STATE: IA

PROJECT TITLE : Pilot-Scale Mixotrophic Algae Integrated Biorefinery

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000739	DE-EE0006245	GFO-0006245-001	

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.)
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 BioProcess Algae (BPA) to complete Budget Period 1A (Preliminary Validation and Negotiation) activities which would allow DOE to collect and analyze the data and information required to make a critical Go / No Go decision on funding BPA's proposed pilot-scale mixotrophic algae integrated biorefinery project under Funding Opportunity Announcement, DE-FOA-0000739: Innovative Pilot and Demonstration Scale Production of Advanced Biofuels (FOA).

This NEPA determination covers Budget Period 1A administrative, analytical, and demonstration activities. Activities would include data collection and analysis, project/facility/office site visits, and biofuel production demonstrations to validate existing equipment, facilities, production processes, data and partnership agreements as claimed in the FOA application. BPA would partner with multiple partners to demonstrate and validate heterotrophic lipid production and production of fuels by metathesis of those algal oils. Production of lipids, algal oils and biofuels would be of limited quantities and in the kilograms.

Budget Period 1B and Budget Period 2 are not being considered at this time, as DOE needs to make a critical Go / No Go funding decision at the conclusion of Budget Period 1A.

Budget Period 1A demonstration of biofuels production would have multiple sub-activities and take place at the following existing, established facilities across the U.S. and Canada:

- Bench-scale baseline operation identification activities would occur at BPA's research and development laboratory facilities, located at the Darling Marine Center, Incubator #9, 193 Clark's Cove Rd, Walpole, Maine.
- Pilot-scale production activities would occur at BPA's pilot-scale algae production facility located at 4124 Airport Road, Shenandoah, Iowa.
- The Installation of a 1,800 gallon fermentation tank and system within an existing ethanol plant as well as pilot-scale production activities would occur at Green Plains Renewable Energy's (GPRE) commercial-scale ethanol production plant, located at 4124 Airport Road, Shenandoah, Iowa. The system would be tied into existing utilities and controls.
- Pilot-scale processing activities would occur at ICM Inc.'s research and development facility and pilot integrated biorefinery production plant, located at 2811 S. 11th Street, Suite 100, Saint Joseph, MO 64503.
- Bench-scale oil extraction and refinement activities would occur at POS Bio-Sciences' research and development facility, located at John and Charlotte Cross Bio-Sciences Centre, 118 Veterinary Road, Saskatoon, SK Canada, S7N

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- Bench-scale biofuel production activities would occur at Elevance Renewable Sciences, Inc.'s research and development facility, located at 2501 Davey Road, Woodridge, IL 60517.

BPA completed an Environmental Questionnaire addressing the protocols for laboratory and facility safety, risk management and waste disposal at all facilities associated with this project. All facilities are established and currently perform work similar to the proposed activities. All facilities have standard safety procedures and equipment in place, and comply with appropriate federal, state and local regulations. All facilities have all applicable permits in place, and would not need additional permits for the proposed activities. All handling, transportation and disposal of hazardous and non-hazardous bio-oils, biofuels, wastes, gases, chemicals, and effluents would comply with appropriate federal, state and local regulations.

The installation of a small fermentation tank and system within GPRE's existing ethanol plant would not impact the use, mission, or operation of the existing ethanol plant and would occur within a previously disturbed and developed facility.

Based on review of the project information and the above analysis, DOE has determined the proposed activities would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with the actions contained in DOE categorical exclusions A9 "information gathering, analysis, and dissemination," and B5.15 "small-scale renewable energy research and development and pilot projects" is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:

Budget Period 1B and Budget Period 2 activities.

This restriction does not preclude you from:

Budget Period 1A activities.

If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

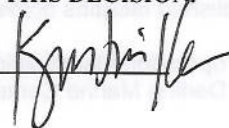
This NEPA Determination requires a tailored NEPA provision.

Obadiah Broughton 8/12/2013

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

Electronically Signed By: **Kristin Kerwin**
NEPA Compliance Officer



Date: 8/15/2013

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 :