

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** University of Arkansas**STATE:** AR

PROJECT TITLE: Integrated Process Optimization for Biochemical Conversion

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001689	DE-EE0008255	GFO-0008255-002	GO8255

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 federal funding to University of Arkansas to develop analytical tools for biorefineries that would enable the identification of an optimal integrated process design ensuring reliable, cost effective, sustainable, robust and continuous feeding of biomass feedstocks.

A NEPA Determination was previously completed for this award on 1/19/2018 (GFO-0008255-002; CX's: A9, B.6). Since that time, the award has been novated from Clemson University to University of Arkansas (UA), as the Principal Investigator has transferred from the former institution to the latter. As a result, UA would now serve as the Prime Awardee and Clemson University would contribute to the project as a Sub-Awardee. This NEPA Determination will review this modification to the scope of the project.

The proposed project activities would not change and would consist of the design, evaluation, and pilot testing of a reactor feeding system. UA and Clemson University would lead computer modeling and evaluation efforts, which would include limited laboratory testing. UA would coordinate all project activities and perform data analysis, literature reviews, and software development at its campus in Fayetteville, AR. Clemson University would undertake data analysis, computer modeling, and material characterization at its campus in Clemson, SC. Laboratory validation of modeling/analysis efforts would be performed at the Process Demonstration Unit (PDU) at Idaho National Laboratory (INL). Validation activities would remain unchanged from the previous review and would consist of biomass processing using existing equipment at INL.

Additional analytical and computer based work would be performed by project partner Open Cloud Institute ('OCI' – San Antonio, TX). OCI would develop a publically-available database, integrating the analytical models developed by UA and Clemson University into a cloud computing infrastructure hosted by the University of Texas at San Antonio (UTSA). OCI would coordinate with UTSA to collect data from UTSA students using the platform. Personal information would not be collected or made public as part of this effort. OCI/UTSA would obtain approval from DOE's Institutional Review Board prior to collecting any data.

No change in the use, mission or operation of existing facilities would result from project efforts at any location. No modifications to or new permits/authorizations would be required to complete the proposed activities. Only existing equipment would be used, and no decommissioning of equipment would be necessary at the conclusion of the proposed project.

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Bioenergy Technologies Office

This NEPA determination does not require a tailored NEPA provision.

Review completed by Jonathan Hartman, 03/20/2020

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.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



Casey Strickland

NEPA Compliance Officer

Date: 3/23/2020

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: _____