

PMC-ND
(1.08.09.13)

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



RECIPIENT:American Institute of Chemical Engineers

STATE: NY

PROJECT TITLE : Rapid Advancement in Process Intensification Deployment (RAPID)

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001578	DE-EE0007888	GFO-0007888-BP1	GO7888

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:

- A11 Technical advice and assistance to organizations** Technical advice and planning assistance to international, national, state, and local organizations.
- 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.)
- B1.31 Installation or relocation of machinery and equipment** Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts.
- 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.
- B3.15 Small-scale indoor research and development projects using nanoscale materials** Siting, construction, modification, operation, and decommissioning of facilities for indoor small-scale research and development projects and small-scale pilot projects using nanoscale materials in accordance with applicable requirements (such as engineering, worker safety, procedural, and administrative regulations) necessary to ensure the containment of any hazardous materials. Construction and modification activities would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible).

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the American Institute of Chemical Engineers to establish the Rapid Advancement in Process Intensification Deployment (RAPID) Institute. The Institute is planned as a consortium established under a Cooperative Agreement with the DOE with participation from sub-recipients of the award, large and small private companies, universities, as well national laboratories, and non-governmental organizations. Focus Area Leaders would be formed primarily by educational organizations and national laboratories as leaders or co-leaders overseeing each Focus Area. The 12 Focus Area Leaders/Co-Leaders would be formed under the RAPID Institute with an emphasis on the following topics: chemicals and commodity processes; natural gas upgrading; renewable bioproducts; intensified process fundamentals; modeling and simulation; and module manufacturing.

RAPID would lead a national effort to research, develop and demonstrate high-impact modular chemical process intensification solutions for U.S. Manufacturing. This would enable improvements in energy efficiency, capital and operating cost factors, environmental emissions, commercial project execution and market penetration thus enhancing

U.S. competitiveness and growth. RAPID would also establish a technical education and workforce development program.

This project has five budget periods but only project activities within budget period 1 (BP1) have been defined. This NEPA Determination is specific to BP1 only. Further NEPA review will be required for the remaining budget periods once those activities have been defined and negotiated.

Up to four initial projects, called Jump Start Projects would be selected by RAPID in up to four of the Focus Areas. Each of the Jump Start Projects in BP1 would be completed by either the prime recipient or one of the project partners. For the project partners listed in question 2b of the completed EQ1, and attached as a separate document in the Project Management Center, the scope of work for proposed activities in BP1 are generally laboratory scale operations, which may include nanoscale materials, component design and fabrication, data analysis and modeling, or educational, managerial, and reporting activities. The location of the facilities and description of proposed activities for the prime recipient and each sub-recipient is detailed within question 2b of the completed EQ1 for the project. None of the activities occurring at any of the listed facilities would require any new permits, licenses or authorizations for BP1 activities. No new waste streams or effluents would be produced as a result of the proposed activities in BP1. All facilities would conduct activities consistent with current operations and would not be expanded or modified in BP1. Equipment acquisition, maintenance, upgrades, and calibration may be required in BP1 but no facilities or operational modifications are anticipated as a result.

Additional entries in question 2b may be incorporated as new partners are brought into the RAPID Institute and specific sites are identified as long as these additional entries conform to the rationale and CXs applied in this NEPA Determination. Any new partners that do not fit the above will be required to submit separate EQ1s for further review.

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 that BP1 fits within the class of action(s) and the integral elements of 10 CFR 1021 subpart B 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. BP1 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 Periods 2 through 5 activities.

This restriction does not preclude you from:

Budget Period 1 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.

Insert the following language in the award:

You are required to:

The recipient is required to consult with the DOE Project Officer and NEPA Specialist regarding any project that would result in:

- changes in function, use, or operation of existing facilities, and/or
- modifications to existing facilities, and/or
- ground disturbing or new construction activities

prior to initiating any of these activities in order to determine whether additional NEPA review is required.

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 :

This NEPA Determination requires a tailored NEPA provision.
Advanced Manufacturing Office
Diana Heyder 03/16/17

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Casey Strickland  Date: 3/16/2017
NEPA Compliance Officer

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: _____ Date: _____
Field Office Manager