

PMC-ND
(1.08.09.13)

U.S. DEPARTMENT OF ENERGY

OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY

NEPA DETERMINATION



RECIPIENT: Michigan Technological University

STATE: MI

PROJECT TITLE: Next-Generation Desiccant-based Gas Clothes Dryer Systems

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001825	DE-EE0008685	GFO-0008685-001	GO8685

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 Michigan Technological University (MTU) to design, develop, fabricate, and test a novel desiccant-based clothing dryer technology. A membrane-based lithium bromide (LiBr) dehumidifier system would be developed and then integrated into a gas dryer appliance for performance testing. The project would be completed over three Budget Periods (BPs), with a Go/No-Go Decision Point in between each BP.

Proposed project activities would include computer modeling (e.g. thermodynamic cycle modeling, computational fluid dynamics simulations), component development/fabrication, component integration into a commercially available dryer system, and performance testing.

MTU would oversee the project and perform design, development, fabrication and testing activities at its campus in Houghton, MI. Certified performance testing of the prototype gas dryer system would also be completed using an environmental testing chamber at the Oak Ridge National Laboratory in Oak Ridge, TN. All project activities would be performed in existing, purpose-built facilities that regularly perform work similar in nature to that proposed as part of this project. No change in the use, mission, or operation of existing facilities would be required as part of this project. Similarly, no additional permits would be required in order to conduct any of the work activities.

Project activities would involve the use and handling of various metals, plastics and industrial chemicals. Any risks associated with the handling of these materials would be mitigated through adherence to established health and safety policies and procedures. Protocols would include personnel training, the use of personal protective equipment, monitoring, oversight, and engineering controls. All waste products would be disposed of by licensed waste management service providers. MTU and its project partners would observe all applicable environmental, health, and safety laws and regulations.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

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.

Notes:

Building Technologies Office

This NEPA determination does requires a tailored NEPA provision.

Review completed by Jonathan Hartman on 3/22/2019

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: 3/22/2019

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: _____