PMC-ND
(1.08.09.13)

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

RECIPIENT: Northeastern University **STATE:** MA

PROJECT TITLE: Innovative Non PGM Catalysts for CHP Relevant Proton Exchange Membrane Fuel Cells

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000966	DE-EE0006965	GFO-0006965-001	GO6965

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:

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 Northeastern University to develop novel fuel cell catalysts for phosphoric acid type proton exchange membrane fuel cells.

Proposed project activities include chemical synthesis of small/test batches of metal organic framework (MOF) catalysts; thermal treatment of catalysts in a controlled gas atmosphere; fabrication of membranes, membrane-electrode assemblies (MEA), and fuel cells; performing structural and chemical characterization; and conducting various electrochemical measurements and tests involving the catalysts, MEAs and fuel cells. All proposed activities consist of bench-scale laboratory work and would take place in existing buildings or laboratories. Proposed work would occur at the university research laboratories of Northeastern University in Boston, MA and University of New Mexico in Albuquerque, NM, as well as the private facilities of Fuel Cell Energy in Danbury, CT, Pajarito Powder in Albuquerque, NM and Advent North America in Hartford, CT. Nanoparticles, in amounts of hundreds of grams, would be used to create the base catalyst materials. Procedures are in place at each location to facilitate the safe use and disposal of nanoparticle-contaminated materials. All project facilities are located on private property. All facilities comply with government safety, emergency, and hazardous waste handling/removal regulations. These facilities are designed for this type of research; therefore, no modifications or new permits, additional licenses and/or authorizations would be necessary.

Based on a review of the project information and the above analysis, DOE has determined that the proposed project would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined that this project is consistent with actions outlined in DOE categorical exclusion B3.6 “Small-scale research and development, laboratory operations, and pilot projects” and B3.15 "Small-scale indoor research and development projects using nanoscale materials" and is therefore 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 you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Fuel Cell Technologies Office

This NEPA Determination does NOT require a tailored NEPA provision.

NEPA review completed by Logan Sholar, 4/02/15

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 4/2/2015

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