

PMC-ND
 (1.08.09.13)

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



RECIPIENT:University of Delaware

STATE: DE

PROJECT TITLE : Highly Stable Anion-Exchange Membranes for High-Voltage Redox-Flow Batteries

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000966	DE-EE0006964	GFO-0006964-001	GO6964

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.
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Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to University of Delaware to develop a set of oxidation-resistant Anion-Exchange Membranes (AEMs) for use in high-voltage, alkaline membrane-based, electrochemical devices such as fuel cells and electrolyzers.

Proposed project activities include polymer syntheses and subsequent stability testing as well as polymer characterization and identification of preparation methods for polymer membranes. Synthesis and characterization work would be performed at a dedicated University laboratory at the University of Delaware in Newark, DE. Polymer testing and fabrication and testing of fuel cells would be completed at the National Renewable Energy Laboratory (NREL) in Golden, CO. Small amounts (10g) of organic chemicals and solvents would be used in the synthesis process, and proper hazardous material-handling training and equipment are in place to vent any waste (fume hoods and scrubbers). All hazardous materials would be managed in accordance with federal, state, and local environmental regulations. Comprehensive university health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments.

For all work conducted at DOE laboratories, project activities may be subject to additional NEPA review by the cognizant NEPA Compliance Officer for the lab and would be required to meet the labs health and safety requirements.

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 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, 3/19/15

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: 
NEPA Compliance Officer

Date: 3/20/2015

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: _____
Field Office Manager

Date: _____