

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



RECIPIENT: Xergy Inc.

STATE: DE

PROJECT TITLE: Novel non-PFSA Proton Exchange Membrane for Fuel Cell Application

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001874	DE-EE0008436	GFO-0008436-001	GO8436

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:

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 Xergy Inc. to develop novel composite proton exchange membrane (PEM) materials with improved physical and chemical properties, enabling enhanced performance as compared with current commercial membrane technologies. The proposed project would be carried out over two Budget Periods (BPs), with a Go/No-Go Decision Point in between each BP.

All project activities would be completed at existing, purpose-built laboratories owned and/or operated by Xergy (Harrington, DE), or its project partners University of Delaware (Newark, DE) and Rensselaer Polytechnic Institute (Troy, NY). All three entities regularly conduct work similar in nature to that included as part of this project. No physical modifications to existing facilities or ground disturbing activities would be undertaken as part of the proposed project. No change in the use, mission or operation of existing facilities would arise out of these efforts. No additional permits, licenses or authorizations would be required to perform project activities.

Proposed project activities include the development of an intellectual property management plan, synthesis/characterization of a BP-Ar3 (co)polymer, demonstration of absorption of BP-Ar3 polymers into porous mesh, composite membrane characterization, electrochemical characterization of BP-Ar3 based Membrane Electrode Assemblies (MEA), and cost analysis.

Chemical solvents, catalysts and gasses would be handled as part of this project. All such handling would occur in-lab. Any risks associated with carrying out project activities would be mitigated through adherence to established health and safety policies and procedures. Protocols would include health and safety training, the use of proper protective equipment, and internal monitoring. Xergy and its project partners would observe all applicable Federal, state, and local health, safety and environmental laws and regulations.

Based on the review of the proposal, DOE has determined the proposal fits within the class of action(s) and the integral elements of Appendix B to Subpart D of 10 CFR 1021 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. This proposal is 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 the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

Fuel Cell Technologies Office
This NEPA determination does not require a tailored NEPA provision.
Review completed by Jonathan Hartman, 10/17/2018

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Electronically Signed By: Casey Strickland Date: 10/17/2018
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