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(1.08.09.13)

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

**RECIPIENT:** Proton Energy Systems**STATE:** CT**PROJECT TITLE:** High Performance Platinum Group Metal Free Membrane Electrode Assemblies Through Control of Interfacial Processes**Funding Opportunity Announcement Number**
DE-FOA-0000966**Procurement Instrument Number**
DE-EE0006958**NEPA Control Number**
GFO-00006958-001**CID Number**

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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Proton Energy Systems to develop anion exchange membrane (AEM)-based electrode technology applicable to electrolyzers and potentially fuel cells.

The proposed project activities would consist of the development and testing of alkaline electrolyte membrane materials and associated catalysts which can be applied to both electrolyzer and fuel cell applications. Basic material synthesis, characterization, and laboratory testing would take place at one of three University laboratories: Pennsylvania State University in State College, PA; Northeastern University in Boston, MA; or the University of New Mexico in Albuquerque, NM. Characterization and processing of materials, assembly of MEAs and complete cell stacks, and testing of prototype cell stack configurations would be completed at Proton Energy Systems' facility in Wallingford, CT. The facilities where the proposed project would occur have been previously used for work that is similar to the activities included in the proposed project, therefore, no new or modified permits would be required, and no construction of new facilities or physical modifications to existing facilities would occur as a result of the proposed project.

The proposed project would involve the use of some hazardous chemicals at each site. However, they will be used in a laboratory setting, and proper chemical hygiene practices, written laboratory/chemical safety procedures, and personal protective equipment use would be observed at all times. Non-hazardous laboratory waste would be treated or disposed of according to the local jurisdictions at each site. Because the quantities of materials used at each site would be small, there would be no significant increase in net disposal or treatment volume to be generated at any given site. No siting, construction or major expansion of waste storage, disposal, recovery, or treatment actions/facilities would be required.

Based on review of the project information and the above analysis, DOE has determined the research, development and testing activities would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusion B3.6 "small-scale research and development, laboratory operations and pilot projects and 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 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.

Review completed by Rebecca McCord, 04/14/2015

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:



Kristin Kerwin

Date: 4/15/2015

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:

Field Office Manager

Date:
