

FMC-ND
(1.08.09.13)

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



RECIPIENT:FuelCell Energy, Inc.

STATE: CT

PROJECT TITLE : "Smart" Matrix Development for Direct Carbonate Fuel Cell

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000360	DE-EE0006606	GFO-0006606-001	

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 federal funding to FuelCell Energy, Inc. (FCE) to develop innovative carbonate fuel cell matrix materials ('Smart' Matrix). This unique material set and design would allow better power output, longer service life, and cost reductions in fuel cell service and manufacturing.

The proposed project would verify fuel cell proof-of-concept and develop the unique chemistry used in the fuel cell matrix; complete the scale-up of the fuel cell components to full-size; demonstrate the manufacturability of carbonate fuel cell matrix materials; test fuel cell stacks to verify design parameters; and conduct analysis of the durability, performance, and manufacturability of the fuel cell matrix design. Bench-scale and fuel cell stack testing would occur at two of FCE laboratory facilities. The University of Connecticut (UConn) and the Illinois Institute of Technology have partnered with FCE and would conduct carbonate fuel cell analysis based on work conducted by FCE.

FCE has established disposal practices for used fuel cell components and matrix at both their Danbury and Torrington facilities. Further, the amount of material that would be used for the proposed project is significantly smaller than what is normally used for making fuel cells at FCE; therefore, negative impacts due to hazardous waste disposal are not expected. All hazardous materials would be managed in accordance with federal, state, and local environmental regulations. There are not expected to be any hazardous emissions produced as a result of the proposed project. Existing corporate health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. There would be no physical modification of existing facilities, no construction of new facilities, and no change in the use, mission, or operation of existing facilities. The project would not require new, or modifications to, permits, licenses or authorizations to perform project activities.

Based on review of the project information and the above analysis, DOE has determined that project 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 A9 "information gathering, data analysis and computer modeling," 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 :

Review completed by Logan Sholar on 8/11/2014.

This NEPA Determination does not require a tailored NEPA provision.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Lori Gray / Lori Gray Date: 8/11/2014
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