

PMC-EF2a

(20402)

**U.S. DEPARTMENT OF ENERGY  
EERE PROJECT MANAGEMENT CENTER  
NEPA DETERMINATION**



RECIPIENT: Kettering University

STATE: MI

**PROJECT TITLE :** 21st Century Renewable Fuels, Energy, and Materials Initiative

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
	DE-EE0003109	GFO-10-426	EE3109

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** Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).
- A9** Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.

## Rational for determination:

Kettering University proposes to use federal funds to research, develop, and fabricate an improved high temperature fuel cell membrane and a novel catalytic flat plate steam reforming process for extracting hydrogen from multi-fuels and integrate with a high-temperature fuel cell power plant to leverage waste heat. They also plan to research and develop improved enhanced oxygen permeable membranes for high power density lithium air batteries and a novel high energy yield agriculture bio-crop suitable for fuel reformation with minimum impact on human food consumption.

This project will take place in research laboratories within existing facilities at Kettering University and at MMI. The applicant has submitted an R & D questionnaire which thoroughly address all chemical and safety protocols.

This project involves information gathering and conventional research and development studies in existing facilities; therefore a CX A9 & B3.6 apply.

**NEPA PROVISION**

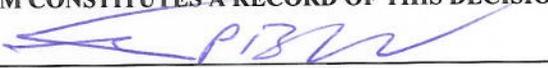
DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

Eugene Brown 6/8/2009

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:   
NEPA Compliance Officer

Date: 7/2/10

**FIELD OFFICE MANAGER DETERMINATION**