

PMC-EF2a

(20102)

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



RECIPIENT: MI Department of Energy, Labor & Economic Growth

STATE: MI

PROJECT TITLE : Renewable Energy & Energy Efficiency Tech Demo - Synthetic Fuel Systems

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000052	DE-EE0000166	GFO-09-148-021	GOO

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:

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The Michigan Department of Energy, Labor & Economic Growth will provide \$58,000 in Recovery Act funds to Synthetic Fuel Systems, Inc. (SFS) to demonstrate a novel waste heat recovery technology. The work will be conducted at G.G. Brown Laboratories, 2350 Hayward Street, Ann Arbor, MI 48109.

This Recovery Act funding will enable SFS to demonstrate a novel waste heat recovery technology for high temperature manufacturing processes at the University of Michigan Thermodynamics Laboratory (i.e., Brown Laboratories). Brown Laboratories will serve as the staging site for review by interested corporate groups. The technology involves the recirculation of high temperature flue gases from industrial furnaces combined with oxygen enrichment to reduce heat loss and fuel usage. The technology is expected to reduce fuel usage by 50% or more.

The main objective of the project is to demonstrate the technology in a lab setting. It is anticipated that a successful demonstration of the technology will enable its deployment in the field. Recovery Act funds will support the following efforts:

- Purchase a PSA oxygen generator.
- Demonstrate the technology in the laboratory (U of M).
- Market the technology to an interested company.
- Test the technology at a corporate site (to be determined)
- Generate reports covering the test results (at U of M and test site)

SFS and Brown Laboratories are in compliance with federal and state environmental statutes. The Michigan Department of Natural Resources and Environment has indicated that the proposed project will not require additional permits. The technology does not use or produce hazardous material/waste. The project will not expand the footprint of the existing building, nor will it require significant construction or repairs of the building. This project will receive the required state, local, and Federal permits/licenses as/if needed.

There are no expected waste management issues associated with this effort. Any prospects for waste handling/disposal will be covered under the waste management plans in place at the University of Michigan.

Based on the information obtained from the State and recipient, DOE has determined that the work outlined is consistent with activities identified in Categorical Exclusion B5.1. This determination is restricted to the work being conducted at the University of Michigan, Brown Laboratories.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Insert the following language in the award:

You are required to:

Notify the DOE project officer should the recipient elect to use Recovery Act funds to support the demonstration of the technology at a corporate site. This effort may require further NEPA review.

Note to Specialist :

According to the project officer, funding for this project is \$58,000. Absent a significant change in the scope of this effort, a change in funding will not affect my determination. A significant change in scope would include the use of Recovery Act funds to support testing/demonstration of the technology at a corporate site.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____
NEPA Compliance Officer

Date: 7/7/10

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: _____