

PMC-EF2a

201002

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



RECIPIENT: Intelligent Energy Inc.

STATE:

PROJECT TITLE : Development and Demonstration of a New Generation High Efficiency 1-10kW Stationary Fuel Cell System

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-PS36-06GO96017	DE-FG36-07GO17013	GFO-07-059-001	GO17013

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.
- 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:

Intelligent Energy Inc proposes to use federal funds to develop and demonstrate an enhanced polymer electrolyte membrane fuel cell combined heat and power system. This is a four year project and this NEPA review is for task 4 of the project, which will be focused on site selection for project demonstration. This task had previously not been cleared for NEPA due to uncertainty of the demonstration site location.

Included in task 4 for the site selection process is site selection, initial fuel cell performance characterization with 99% hydrogen, system modeling, system engineering updates, combined heat and power system modifications and repackaging, pre-deployment commissioning and testing, installation and commissioning, onsite support & plant demonstration, and site restoration.

Intelligent Energy Inc will demonstrate this project at Chalvey of Slough, Berkshire, United Kingdom. The project will take place in the former offices of Scottish and Southern Energy Ltd. The fuel cell demonstration unit will be installed in a pre-built room that is part of a larger multi-dwelling green showcase complex. Post demonstration period, the unit will be taken to the Intelligent Energy facility in the UK for tear-down analysis. An R & D questionnaire has been submitted and thoroughly addresses safety and chemical handling protocols.

This project comprises of siting and construction of a demonstration area for research and development within an existing building; therefore a CX A9, B3.6 & B5.1 applies.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: 
NEPA Compliance Officer

Date: 5/13/10

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: _____