PMC-EF2a
(2/04/02)

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

RECIPIENT: Intelligent Energy Inc. **STATE:** CA

PROJECT TITLE : Development and Demonstration of a New GenerationHigh 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-GO17013-002	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:

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.

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).

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:

Intelligent Energy Inc proposes to use federal funds to develop and demonstrate an enhanced polymer electrolyte membrane fuel cell combined heat and power system. Tasks 1, 2, and 3 were previously approved by GFO-07-059 on May 16, 2007. Task 4 had previously been cleared for NEPA by GFO-07-059-001 on May 13, 2010 but subsequent to that determination a different demonstration site location was selected and therefore another NEPA determination was needed. This NEPA review is for tasks 4 and 5 of the project, which are focused on site selection for project demonstration and project management and reporting.

Task 4 – System Retrofit, Optimization, Integration, Shipping, Site Installation and Testing
Task 5 – Project Management and Reporting

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 would demonstrate this project at the Strathclyde Business Park, Bellshill, Lanarkshire, Scotland. The demonstration site is comprised of a business park surrounded by commercial buildings and a wooded area (forest). The fuel cell unit will be installed in the Visio-Bellshire Facility and occupy testing bays that will be constructed specifically for the demonstration. Decommissioning will include the removal of the fuel cell and reformer equipment from the site and any water, natural gas piping, flue ducting, and electrical panels/wires. All equipment will be taken back to the Intelligent Energy facility in the UK for tear-down and analysis. The mounting area will be reconditioned with new paint and/or cement patches. An R & D questionnaire has been submitted and thoroughly addresses safety and chemical handling protocols. Permitting for Task 4 would follow RR715 (UK HSE) Installation permitting guidance for hydrogen and fuel cell stationary applications: UK version.

This project is comprised 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 :

EF2a prepared by Casey Strickland

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 8/15/2011

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