PMC-EF2a

(2.06.02)

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

RECIPIENT: South Carolina Hydrogen and Fuel Cell Alliance **STATE:** SC

PROJECT TITLE : South Carolina Landfill Gas Purification Project

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE ¡V PS36-08GO98000	DE-FG36-08GO18113	GFO-08-179-001	GO18113

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.

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:

South Carolina Hydrogen and Fuel Cell Alliance (SCHFCA) would expand their outreach activities to develop and deploy fundamental educational materials on hydrogen technologies for government officials and to institutionalize the distribution mechanisms for hydrogen education within existing public and private organizations. A Land Fill Gas (LFG) demonstration project would also be conducted to provide hydrogen to power a "test group" of fuel cell powered material handling equipment (MHE). A comparison of the LFG powered MHE to a "control group" of MHE's powered by "traditional" industrial gas providers would also be conducted. This project was previously approved by GFO-08-179 on August 21, 2008 with a CX A9 (Tasks 1, 2, and 9 of the present SOPO). Due to changes to the project scope another NEPA determination was needed. This NEPA determination is specific to Tasks 3.0 through 8.0 of the SOPO.

This project is divided into multiple tasks with sub-tasks.
3.0 Facilitate Cooperation and Best Practices within Southeastern States
4.0 Feasibility Study and Business Case Analysis – focus on validating the feasibility and business case for a fully scaled-up effort to convert landfill gas to hydrogen on the site of the host facility in sufficient quantity to provide hydrogen to 400 pieces of MHE.
5.0 LFG-to-Hydrogen Production and Testing – technical feasibility of recovering the hydrogen from LFG using commercially available steam-methane reformer technology.
6.0 Side-by-Side Testing – hydrogen produced from the purified LFG source would be compressed, stored, and distributed to a single site within the host site manufacturing facility that would permit comparison of the LFG powered "test group" to the conventionally fueled "control group" of MHE's.
7.0 Public Outreach and Education
8.0 Work Force Development
Installation of equipment for project activities would occur in an industrial manufacturing area adjacent to an existing LFG production facility. Limited excavation of an existing gravel lot would be necessary for the concrete equipment pad (50' X 50'). A small trailer on the concrete pad would house much of the system equipment.

Tasks 3.0 through 8.0 of this project are comprised of information gathering, data analysis, document preparation, and actions to conserve energy through small-scale renewable energy research and development; therefore the DOE has categorized this proposal into Categorical Exclusions A9 and B5.1.

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: 8/31/10
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