



FMC-EF2a

(20402)

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



RECIPIENT: State of North Carolina - Columbus County

STATE: NC

PROJECT TITLE : Landfill Gas Utilization - Columbus County

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-EE0000771	GFO-10-634-001	0

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:

Columbus County is proposing to use EECBG ARRA funding for completion of Phase II of the Landfill Gas project. Phase II, utilization of collected landfill gas, will include – purchase and installation of a 250kW generator, installation of an onsite greenhouse and planning for Phase III , a bio-fuels incubator in conjunction with a Southeastern Community College (SCC) program. Columbus County is requesting \$544,500 to fund the implementation of Phase II. The EECBG funding will be used for Phase II only as described above. Phase I will be completed before EECBG grant funds are acquired. The proposed project will occur on the closed landfill which takes up 30 acres of the 200 acre landfill property. Additional acreage will be minimal – less than ¼ acre for a flare station and electrical generator. Possibly up to another ¼ acre will be used to establish a greenhouse that will be heated by waste heat from the generator.

Potential environmental impacts of the project and associated actions include:

- Air Quality – Air quality should improve as a result of the proposed project. Methane gas that is currently being vented directly into the atmosphere will be captured and used to produce electricity. An air permit is required from the NC DNR Division of Air Quality.
- Water Quality – State of NC requires a Sedimentation and Erosion Plan if more than one (1) acre is being disturbed. Landfill closure guidelines require a stormwater management plan be in place. The proposed project is not expected to have adverse effects to water quality.
- Ground Disturbance –Generators will be located in a small, metal shell building. The generator building will be ~1,200 sq ft. The greenhouse will be 7,150 sq ft. This includes a 400 sq ft “head house”. The proposed project will occur on land that is a closed landfill and previously disturbed. There will be no adverse effects to threatened and endangered species, critical habitat, wetlands, floodplains, or cultural resources as a result of the proposed project.
- Noise – The generator will be located inside an enclosed structure and muffled, which should minimize the noise. The site is a low density, rural area with no occupied structure within 100 yards. Adverse effects from noise will be negligible.
- Visual – The proposed project will occur at a closed landfill in a rural area that is surrounded by wooded areas. Adverse visual effects are not expected as a result of the proposed project.
- Threatened and Endangered Species – The proposed project will occur on a partially closed landfill that is fenced. There will be no adverse effects to threatened and endangered species or critical habitat as a result of the proposed



project.

- Permits – The air permit for flaring has been applied for and is pending approval. No further action is needed other than processing by the state. Air permitting for the engine has not been submitted, but will be obtained before operation. The solid waste permit application is mostly complete. It is needed for the collection system only and is actually a modification of the post closure permit for the landfill. Turn-around time on the solid waste permit is generally short.

DOE has assessed potential impacts from all phases of the proposed project. After a thorough review of the information submitted for the proposed project, it has been determined that the actions involved will not have a significant impact to human health and /or the environment. The proposed project will result in a reduction in the use of conventional fossil fuels; therefore it is hereby Categorical Excluded B5.1 "actions to conserve energy," from further NEPA review.

**NEPA PROVISION**

Insert the following language in the award:

You are required to:

The recipient is required to obtain the necessary permits for all actions involved with the proposed project.

Note to Specialist :

EF-2a prepared by Logan Sholar.

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

NEPA Compliance Officer Signature:



NEPA Compliance Officer

Date:

9/22/10

**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:

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Field Office Manager

Date:

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