

PMC-EF2a

(20402)

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



RECIPIENT: Louisiana -- Bioenergy Systems

STATE: LA

**PROJECT TITLE :** Recovery Act -- State Energy Program

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0000052	EE0000124		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.
- B2.5** Safety and environmental improvements of a facility, including replacement and upgrade of facility components, that do not result in a significant change in the expected useful life, design capacity, or function of the facility and during which operations may be suspended and then resumed. Improvements may include, but are not limited to: Replacement/upgrade of control valves, in-core monitoring devices, facility air filtration systems, or substation transformers or capacitors; addition of structural bracing to meet earthquake standards and/or sustain high wind loading; and replacement of aboveground or belowground tanks and related piping if there is no evidence of leakage, based on testing that meets performance requirements in 40 CFR part 280, subpart D (40 CFR part 280.40). This includes activities taken under RCRA, subtitle I; 40 CFR part 265, subpart J; 40 CFR part 280, subparts B, C, and D; and other applicable state, Federal and local requirements for underground storage tanks. These actions do not include rebuilding or modifying substantial portions of a facility, such as replacing a reactor vessel.

## Rational for determination:

The State of Louisiana will provide \$2,147,496 in Recovery Act funds to BioEnergy Systems, Inc., in partnership with M.A. Patout and Son, Ltd. to construct the RJ2000 Gasification System. The gasifier will use sugar cane bagasse to produce electricity, steam, hydrogen and activated charcoal. The project is located at 3512 J. Patout Burns Rd, Jeanerette, LA.

Recovery Act funds will be used to off-set equipment costs associated with the installation of the system. Equipment purchases may include the dryer and cyclone, oxygen concentrator, fuel storage, gasifier, carbon cooling tank, converter to gasifier, converter to carbon bagger, gas scrubbing/tar removal, gensets, electronics/valves, etc.

The BioEnergy gasifier will produce up to 80% hydrogen output from sugarcane bagasse. The system design approaches that of a closed system with all products and nearly all byproducts consumed or utilized. The gasifier will yield syngas that will be used to produce a liquid fuel, steam that will be used to dry feedstock, steam/heat that will be used to produce electricity, and charcoal that can be sold on the market. Air emissions consisting primarily of particulates and carbon dioxide will evolve from the drying and power-production process. Based on design criteria and modeling, air emissions are expected to fall well within EPA set limits.

The gasifier facility will occupy about 4 acres of previously disturbed land owned by M.A. Patout and Son, Ltd. and adjacent to the Patout sugar mill in Jeanerette. The system will be rated at 10 megawatts and will occupy an existing building at the site. The system has sufficient power to provide the mill with electricity for its' 100-day operating season. Any power produced beyond the needs of the plant will be sold to the grid.

The facility will not impact wetlands, floodplains, or coastal areas. Habitat will not be impacted as the plant will occupy predisturbed land and land that is dedicated to growing and harvesting sugar cane. Model analyses indicate that the gasifier will exceed EPA emissions standards; it is rated to meet California standards.

In view of the information provided by the State and recipient, DOE has determined that the work outlined is consistent

with activities identified in Categorical Exclusion B5.1.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

According to the project officer, funding for this project is \$2,147,496. Absent a significant change in the scope of this effort, a change in funding will not affect my determination.

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

NEPA Compliance Officer Signature: \_\_\_\_\_

NEPA Compliance Officer

Date: 8/26/10

**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: \_\_\_\_\_