PMC-EF2a
(2.04.02)

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

RECIPIENT: Louisiana -- Rain CII Carbon **STATE:** LA

PROJECT TITLE : Recovery Act -- State Energy Program

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
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 Louisianna will provide $2,578,772 to Rain CII Carbon, LLC (Rain's) to install a heat recovery system, power generation system, and related environmental equipment to improve the plant's energy operations. The work will be performed at Rain's calcining facility located at 1920 Pak Tank Road, Sulphur, LA.

The Rain calcining facility operates two high temperature rotary kilns processing petroleum coke. The exhausts of the rotary kilns are combined and exit to atmosphere at temperatures ranging from 1800°F to 2100°F through a refractory lined stack. The proposed work will capture the lost energy to generate electricity for use inside the plant and for sale to the grid while operating as a Qualifying Facility (QF) as defined by PURPA and the Federal Energy Regulatory Commission (FERC).

The construction site is wholly owned by Rain. The work will be adjacent to and attach to the existing calcining plant. The power generation system will not require an extermal source of fuel as the energy to be used to create steam and subsequently electric power is currently being exhausted though the calciners stack.

The work will require the installation of a Heat Recovery Steam Generator "HRSG". The HRSG converts the heat from the exhaust to steam, prior to its release to atmosphere. The exhaust will be cooled to 400°F and the HRSG will produce approximately 300,000 lb/hr of superheated steam at 900psig and 900°F. The steam will be piped to a turbine/generator producing approximately 36MW. Rain expects to use 3MW on site and the remainder exported to the grid through the plant's existing tie-in with the utility. The exhaust when cooled to 400°F is expected to contain trace SO3 vapor, which if released directly to the atmosphere would show a visible plume. To prevent this, a bag house with lime injection will be installed to scrub the SO3 from the exhaust prior to release. The project will not increase emissions of any criteria air pollutant or have a negative impact on water effluent.

Modification to the plants existing Title 5/Part 70 Operating permit has been approved by the Louisiana Department of Environmental Quality, which also serves as the construction permit. Modification to the plant's LPDES water permit is required to account for HRSG blowdown, cooling tower blowdown, and reverse osmosis (RO) equipment effluent. The

permit will be issued before operation commences. Solid waste disposal of the spent reagent from the baghouse must be reported annually. This is a non-hazardous waste that will be disgarded via existing permits.

The work will not increase the footprint of the plant. Construction of the heat exchange system, generator, and baghouse will occur on previously disturbed land within the plant. In view of the information provided by the State and recipient, the work outlined is consistent with activities identified in Categorical Exclusion B5.1 and B2.5.

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 $2,578,772. 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: _____ Date: 8/13/10

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