PMC-EF2a

(20602)

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

RECIPIENT: Vermont Sustainable Jobs Fund **STATE:** VT

PROJECT TITLE: Vermont Biofuels Initiative: Renewable Energy Resources CDP-09

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-FG36-08GO88182	GFO-GO88182-026	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:

DOE is proposing to provide federal funding to Vermont Sustainable Jobs Fund, sub-recipient Renewable Energy Resources (RER), to research and develop a mobile briquetting system. At a rate of one-ton per hour, the system would be capable of processing grass fibers and compacting them into a dense fuel.

RER proposes to increase the supply of dedicated energy crops, such as switchgrass and mulch hay, in Vermont. RER would design and assemble the basic equipment necessary to process grass biomass into boiler ready fuel and develop pilot programs that would demonstrate the benefits of grass biomass. RER is located at 63 Southshire Drive, Bennington, VT 05201 (42.861645 Latitude; -73.204725 Longitude). RER would work with local farms, including Bristol, Bennington and Basin Harbor to develop transition plans from low production mulch hay to high yield biomass energy crop.

The briquetting machine would be designed to be mobile in order to operate at different locations. The system would be designed to be driven on local country roads where the crop biomass is produced. The mobile machine would provide either boiler ready, chopped crop biomass or compacted briquettes. The equipment would fit on three, twenty-foot trailers. Trailer 1 would include the tractor and the bale grinder. Trailer 2 would include the generator and storage bin. Trailer 3 would include the compression dies. The weight of each trailer would be below 14,000 lbs. The briquetting machine would be powered by a 105 kW diesel generator.

The briquetting machine is comprised of three units/stages: 1) the bale grinder, 2) the storage hopper and 3) the compression dies. The briquetting machine would grind the bales using a 5/8" screen. The bales would be course ground to 1"-2" and then finely ground using a hammer mill. This process produces dust. Because this is a mobile machine, RER would install a dust recovery system. A cyclone would be fitted to the output of the bale grinder. The collected dust would be circulated into the raw material feed system and be incorporated into the briquettes. The second and third stages include the storage bin and the compression dies. The raw material would be moved between operations using screw conveyors with closed covers. The final output would either be fed into a truck for direct delivery to the customer's boiler storage facility or stored on the concrete floor of the enclosed dry barn at RER to be picked up by the customer.

RER would also test the briquettes for feasibility, burn characteristics and boiler system operations and maintenance. The briquettes would be tested in the heating systems of Basin Harbor Resort, Sugarbush Ski Area and Brattleboro Union School.

Per the recipient, each of the above facilities have permits in place to comply with air emission regulations. RER has met with the Department of Natural Resources, Air Pollution Division to confirm the requirements for burning crop

biomass. RER is working with several potential customers to comply with the zone and permitting requirements. In some cases, to meet EPA regulations, a cyclone and bag house would be required for larger systems.

The proposed project would include developing farm standards for grass biomass production, designing and building a mobile briquetting machine, sourcing grass biomass in Vermont, producing briquettes for testing, developing reports and presentations to show the benefits of growing grass as biomass fuel, and project management and reporting.

Based on this information, DOE has determined that the work outlined is consistent with activities identified in Categorical Exclusion B5.1 (actions to conserve energy).

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Cristina Tyler 8.24.2011

DOE Funding: $100,000
Cost Share: $143,253
Total Project Cost: $243,253

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Kristin Ice Date: 8/29/2011

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