

PMC-EF2a

(2.04.02)

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



RECIPIENT: Nevada State Office of Energy

STATE: NV

PROJECT TITLE : Renewable Energy and Energy Efficiency Revolving Loan Program - Avatar Energy, LLC.

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000052	DE-EE-0000084	GFO-10-145-005	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:

The Nevada State Office of Energy will provide \$1,200,000 in Recovery Act funds to Avatar Energy, LLC to install an anaerobic digester and a 65kW combined heat and power (CHP) generation unit at the existing, Frade Ranch dairy farm. The farm is located at 123 MacKenzie Lane, Yerington, Nevada 89447.

The property is located in a rural farming region and is situated on the corner of East Bridge Street and MacKenzie Lane. The work will take place on land owned by Frade Ranch. The total ground disturbance will be less than 1 acre. The digester barn footprint for the anaerobic digester system is expected to be 40' x 175'. The digester is an above-ground, tubular, fiberglass-based system. Installation will utilize a modular and scalable design platform configured to accommodate the topography of the land. The digester hulls will be placed inside a solar barn for protection from the elements and sit on packed gravel. The proposed site has been utilized as part of the existing facility operation; the land has been previously disturbed. Due to the relatively flat topography and current use of the site, the project will require minor excavation to accommodate placement of the building and equipment.

The farm currently collects manure from the milking herd (stalls, barn floor and milk house floor) through the use of alley scrapers, which passively feed the storage lagoon. For this project, the dairy manure will be collected as per the normal farm operation and then diverted into the Anaerobic Digester for processing. Effluent from the digester will flow into a screw press to separate the solids and liquids. The liquids from the separator will flow into the farm's existing storage lagoon and the solids will be collected for bedding. No new waste water will be generated; the farm's existing pond will accommodate the effluents produced. Due to the separation of solids, the total liquid waste volume storage requirements will be reduced by at least 15%. Waste management will be simplified; waste volume reduced.

Operation of the digester is expected to improve air quality, both in terms of greenhouse gases emissions as well as odor. There are no wetlands or floodplains in the vicinity; the project and ensuing operation will not generate new waste water or solid byproducts. As the proposed site is an active farm operation, DOE does not anticipate adverse effects to threatened and endangered species or disturbance to cultural resources.

The project will require an air quality permit from the State of Nevada Division of Environmental Protection and will also require a Nevada Concentrated Animal Feeding Operation (CAFO) permit from State of Nevada Division of Environmental Protection, Bureau of Water. Local permits will be administered through Lyon County, and will include a building, grading, and erosion control permit for the site and structure. Permit applications have been filed with the state and local authorities.

The digester will be part of the farm's CHP facility. Plans are to connect to the grid through an underground conduit. There is access to Nevada Energy transmission lines at the proposed farm site. The farm will net meter the generated

power with Nevada Energy to offset their current utility expenses under the Nevada Energy Net Metering policy. The farm's current consumption is in excess of what the digester will generate. There is a likelihood; however, that the farm will produce more biogas that can be utilized by the CHP. The farm plans to use excess biogas as an offset to the LP gas used for drying and heating equipment.

Based on the information provided by the State and recipient, DOE has been determined that the work outlined will not have a significant impact to human health and/or the environment and is consistent with activities identified in Categorically Excluded 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:

Insert the following language in the award:

You are required to:
ensure that Avatar is in compliance with Sec. 106 of the National Historic Preservation Act (NHPA), consistent with DOE's 2009 letter of delegation of authority regarding the NHPA. If applicable, the sub-recipient must contact the State Historic Preservation Officer.

obtain the necessary permits regarding all actions involved with the proposed project.

Note to Specialist :

according to the project officer, funding for this project is \$1,200,000. 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: 8/26/10
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