

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



RECIPIENT: Ohio Department of Development

STATE: OH

PROJECT TITLE : SEP ARRA - Lime Lakes Energy, LLC

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-EE0000165	GFO-0000165-042	GO

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:

B5.20 Biomass power plants The installation, modification, operation, and removal of small-scale biomass power plants (generally less than 10 megawatts), using commercially available technology (1) intended primarily to support operations in single facilities (such as a school and community center) or contiguous facilities (such as an office complex); (2) that would not affect the air quality attainment status of the area and would not have the potential to cause a significant increase in the quantity or rate of air emissions and would not have the potential to cause significant impacts to water resources; and (3) would be located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

Rational for determination:

The U.S. Department of Energy (DOE) provided federal funding to the State of Ohio Department of Development (ODOD) under the DOE's American Recovery and Reinvestment Act of 2009 (ARRA) State Energy Program. ODOD is proposing to provide federal ARRA funding to Limes Lakes Energy, LLC (LLE) to partially fund the purchase of equipment and the installation of an anaerobic digester system and facility with an 800 kW combined heat and power (CHP) generator. The facility would be located on the property of a soda ash production operation that is actively being reclaimed and restored. The operation and property is owned and operated by PPG, Industries, Inc. (PPG) and known as the "PPG Lime Lake Reclamation Site". The anaerobic digester system and facility would generate electricity and thermal heat from the combustion of biogas produced from approximately 80 wet tons per day of biomass feedstock composed of bio-solids, expired food wastes (beverages) and switch grass. The facility would be grid-tied. Electricity would be provided to the local utility via a net-metering agreement. Generated thermal heat would be reintroduced into the anaerobic digestion process. Effluent (digestate waste) from the anaerobic digestion process would be land applied on site to supplement PPG's reclamation and restoration activities.

PPG's soda ash production operation was active for over 70 years. During this time liquid solid wastes were pumped from the soda ash operation into six ponds creating "lime lakes" that were too alkaline to support vegetation. Since 1985, PPG has worked to reclaim and restore the "lime lakes". Bio-solids from municipal wastewater have been mixed in the ponds with the soda ash waste lime spoil to create a stable soil matrix that supports long-term vegetation growth and wildlife habitat. Per the recipient, PPG has won numerous awards for its reclamation efforts.

A previous NEPA determination for this ODOD sub-award to LLE, (CX B5.1; GFO-0000165-031; 7/5/2011) was made on activities involving the purchase of equipment and the installation of an anaerobic digester system and facility at the PPG owned property. LLE has subsequently made modifications to the design of the facility. However, it is still proposed for the same location and LLE has begun initial site preparation activities, including the removal of trees from the project site, and the ordering of long lead time equipment. Prior to the previous NEPA determination, the Ohio Dept. of Natural Resources and the U.S. Fish and Wildlife Service were consulted to determine if the removal of trees from the project site would adversely impact state or federal endangered or threatened species or their habitat, and it was determined it would not. Modifications to the facility design include a larger 230,000 gallon feedstock tank instead of two smaller 75,000 gallon feedstock tanks, a larger 40 foot by

40 foot operations building instead of three smaller 40 foot by 10 foot containers and a redesigned facility layout. This NEPA determination applies to the redesigned system and facility as it is currently proposed.

Lime Lakes has received additional funding for this project from the U.S. Department of Agriculture's (USDA) Rural Energy for America Program. Lime Lakes has received a financial assistance grant and a loan guarantee from USDA. USDA performed a NEPA Class I Environmental Assessment of the proposed project and issued a Finding of No Significant Environmental Impact (FONSI), on 8/31/2011. USDA has required environmental impact mitigation measures to be included into the construction of the project. DOE has determined that these mitigation measures are integral elements of the project and must be adhered to by the recipient.

The facility, as previously proposed, would be constructed on a portion of the "PPG Lime Lake Reclamation Site" located at 1740 Vanderhoof Road in Barberton, Ohio. The project site would be on previously disturbed land, located in a flat partially forested area of the property on the southwest corner of a reclaimed "lime lake" and directly adjacent to a municipal wastewater treatment plant. The forest is a reclaimed, planted, and young successional woodland containing mainly two to ten inch diameter size maple, cherry, and white oak tree species. Located adjacent to the proposed facility are additional lime lakes, a municipal wastewater treatment plant, vacant fields, additional forest, and isolated residences. The closest residence is approximately 600 feet.

To install the proposed system, site work would include grading, trenching and excavation activities for structure foundations, utility connections, and a 500 foot by 40 foot gravel access road and truck unloading area. As stated above, trees have been removed from the forested portion of the project site. Less than two acres of previously disturbed land would be temporarily disturbed during installation of the facility and the final project foot print would be approximately one acre. Infrastructure would include a 750,000 gallon anaerobic digester tank, a 230,000 gallon feedstock tank, two 12,000 gallon liquid receiving pits (12 feet deep), a 40 foot by 40 foot operations building, a 800 kW CHP generator unit housed within a noise reducing container equipped with a sound damping muffler (68 dB at two meters), a gas flare, and a concrete truck unloading/turnaround area. All other access/operation roads already exist.

Operation of the facility would involve processing approximately 80 wet tons per day of feedstock. Feedstock would be delivered in dump and tank trucks. Biogas generated from the anaerobic digester would be burned in the 800 kW CHP unit and thermal heat would be reintroduced into the process. As an additional by-product the system would generate Class B effluent (digestate) which would contain plant nutrients and organic matter to be used as an amendment to soils. The storage, disposal and land application of this effluent has been permitted by Ohio Environmental Protection Agency. The anaerobic digester would be operating at an active reclamation site with regular truck traffic. Daily the PPG reclamation site accepts between 10 to 12 truckloads of regional bio-solids. Approximately 25% of these existing loads would be diverted to the anaerobic digester as a feedstock. Approximately, a combined ten trucks a day would transfer feedstock in and transport effluent out of the anaerobic digester facility.

Prior to the previous NEPA determination, the Ohio Dept. of Natural Resources and the U.S. Fish and Wildlife Service were consulted and both determined that the proposed project would not result in adverse effects to state or federal threatened and endangered species. The project site is within the range of Indiana Bat a state and federal endangered species. As tree removal is part of the project scope, an India Bat Survey was performed by an approved bat surveyor. (survey is titled: "Indiana Bat Survey, PPG Lime Lakes Reclamation Site, Franklin Township, Summit County, Ohio", June 2011) Indiana bats were not captured during the survey, and it was determined the forest on the project site was not active Indiana Bat habitat. Both agencies reviewed the report and stated the survey results were valid for two years. LLE has subsequently cleared all trees proposed for removal.

Prior to the previous determination, the Ohio State Historic Preservation Office was consulted and concluded the proposed project would not affect historic properties.

As the project is proposed for the same project site and the proposed modifications to the system's design are contained within the previously assessed project site, DOE has determined no additional consultations are needed.

LLE has received and supplied DOE with copies of pertinent Ohio Environmental Protection Agency permits in regards to air emissions, handling and disposal of bio-solids, wastes, and effluents, and storm water discharges during construction:

- Air Pollution Permit-to-Install and Operate (PTIO) (Facility ID 1677000621; Permit # P0108653)
- Storm Water Construction General Permit - OHC000003 (Facility Permit #3GC05618*AG);
- National Pollutant Discharge Elimination System (NPDES) permit authorization to handle bio-solids, discharge Stormwater and land apply system effluents (Permit # 3IN00372*BD);
- Wastewater Permit-to-Install (PTI) wastewater disposal system (#821027)

Based on the review of the project information and the above analysis, DOE has determined the installation the anaerobic digester system and facility with a CHP generator to produce electricity, in a previously disturbed area would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusion B5.20 "installation of small-scale biomass power plants" and is categorically excluded from further NEPA review.

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.

Insert the following language in the award:

You are required to:

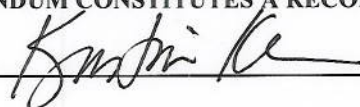
Adhere to the following required environmental mitigation measures from the USDA Class I Environmental Assessment and FONSI (8/31/2011).

1. Control of unnecessary noise.
2. Dust control measures.
3. Permanent erosion control through suitable drainage, finish grading and seeding.
4. Compliance with OSHA and ODOT safety standards and regulations.
5. Provide temporary sanitary facilities.
6. Measures during construction include erosion and sedimentation control in accordance with ODNR Rainwater and Land Development Manual.
7. During operation, the facility will obtain and operate within the required local and state permits.
8. The project will be required to comply with the Ohio Environmental Protection Agency (OEPA) regulation regarding Storm Water Discharges Associated with Construction Activity under the National Pollutant Discharge Elimination System (NPDES).
 - The Contractor should apply for, obtain, and pay for the NPDES Construction Storm Water Permit.
9. No further coordination with OHPO (Ohio Historic Preservation Office) is required unless the project scope changes or historical or cultural resources are discovered during the course of the project. Any excavation by the contractor(s) that uncovers an historical or archaeological artifact shall be immediately reported to the borrower and the State Environmental Coordinator. Construction shall be temporarily halted pending the notification process and further directions issued by the Agency after consultation with the State Historic Preservation Office (SHPO).
10. The USFWS supports and recommends mitigation activities that reduce the likelihood of invasive plant spread and encourage native plant colonization. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats. Therefore, all disturbed area in the project vicinity should be mulched and re-vegetated with native plant species, while staging areas should be kept well away from streams and wetlands. They recommend that construction areas and altered stream banks be quickly replanted with native vegetation following construction.
11. During construction and operation wetlands need to be avoided.

Note to Specialist :

Obadiah Broughton 6/14/2013

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: 

Date: 6/14/2013

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