Finding of No Significant Impact

Proposed Methane Energy and Agricultural Development
Port of Tillamook Bay Dairy Digester Project

AGENCY: U.S. Department of Energy (DOE)

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: DOE has prepared an Environmental Assessment (EA), DOE/EA-1402, to analyze the potential environmental effects of a proposal to provide Federal funds for construction and operation of a plug-flow dairy digester at the Port of Tillamook Bay (POTB) Industrial Park in Tillamook County, Oregon. The dairy digester, which would be located on about four acres of a 7.5-acre concrete pad within the 1,600-acre POTB Industrial Park, would process manure produced by about 2,000 dairy cows from farms in the immediate vicinity of the Industrial Park.

Manure would be collected by truck from participating dairies in Tillamook County, transported to the digester location within the Industrial Park, and processed in an enclosed, anaerobic system to produce biogas – a mixture of methane and carbon dioxide. The biogas would be combusted in an engine-generator system to produce 295 kilowatts of electrical power. Other products would be hot water, pathogen-free fiber, and nutrient-rich liquid that would be returned to the participating dairies for use as a fertilizer.

Based on the analyses in the EA, DOE has determined that the proposed action is not a major Federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969, 42 United States Code 4321, *et seq*. Therefore, preparation of an Environmental Impact Statement is not required, and DOE is issuing this FONSI.

COPIES OF THE EA ARE AVAILABLE FROM:

Mr. Lloyd Lorenzi
NEPA Compliance Officer
U.S. Department of Energy
National Energy Technology Laboratory
P.O. Box 10940
Pittsburgh, PA 15236-0940
(412) 386-6159

INFORMATION ON THE DOE NEPA PROCESS IS AVAILABLE FROM:

Ms. Carol M. Borgstrom, Director
Office of NEPA Policy and Compliance
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585-0119
(202) 586-4600 or 1-800-472-2756

BACKGROUND: Key objectives of DOE's mission are to ensure energy availability and to develop domestic, renewable energy resources. DOE's policy relating to biomass is consistent with Executive Order 13134, "Developing and Promoting Biobased

Products and Bioenergy," which promotes renewable farm resources in the production of energy. The Dairy Digester Project would also be consistent with the broader objectives of DOE's Biopower Program to encourage energy self-reliance, improve air quality, and reduce greenhouse gases. Under the Biopower Program, DOE provides funds to demonstrate the commercial application of alternative and "green" energy sources (i.e., energy derived from renewable sources, which significantly reduces discharges of pollutants into the environment).

DESCRIPTION OF THE PROPOSED PROJECT: DOE's objective in funding construction and operation of the Dairy Digester Project is to demonstrate a proven technology for processing farm animal manure, while simultaneously producing clean, renewable electrical power and other marketable products. Transporting manure from participating farms for processing in the enclosed anaerobic digester, and returning nutrient-rich liquid back to the farms for land application, would provide a service to the community. The 160 dairy farmers in Tillamook County have experienced serious problems with storage of manure, particularly in the winter months when precipitation is significant. The Dairy Digester Project would provide an option to storage that may benefit both farmers and local water quality. The project would also generate potentially valuable byproducts, including hot water, pathogen-free fiber from composting, and electricity.

ENVIRONMENTAL IMPACTS: The environmental analysis identified that the most notable changes to result from the proposed project would occur in the following areas: air emissions and water quality. No substantive adverse impacts or environmental concerns were identified from analyzing the potential effects of these changes.

AIR QUALITY AND ODOR: Intermittent and transient increases in nitrogen oxides, particulate matter, and carbon monoxide emissions would occur during the construction phase of the project, due to vehicular exhaust emissions from construction equipment and "fugitive" particulate emissions from wind erosion during site preparation. All air quality impacts during construction would be temporary and intermittent, and all emissions from construction and operation would be well below all state and Federal regulatory limits. No additional odorous matter would result from construction or operation of the dairy digester. A potential benefit may result from fewer odors, because raw manure would be processed through an enclosed system rather than stored in open areas and applied directly to land as fertilizer. Manure processing would also reduce emissions of methane, a greenhouse gas.

WATER QUALITY: The project would mitigate some existing environmental risks (such as pathogen risk) associated with current land application of raw manure, in which water runoff can contribute to contamination of rivers in the Tillamook watershed. Land application of nutrient-rich liquid produced from raw manure, rather than application of raw manure, may have a beneficial impact to local waterways.

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WASTEWATER: Construction activities would not change wastewater production for the Port of Tillamook Bay Industrial Park, which is currently 6,000 gallons per day. Operational activities would generate approximately 5 gallons of wastewater per day.

AESTHETICS AND LAND USE: The dairy digester would be constructed on an existing 7.5-acre concrete pad located in an Industrial Park zoned for industrial use. No measurable impacts on land use within the vicinity of the industrial site would result, and the project would not interfere with visual resources.

TRAFFIC AND TRANSPORTATION: Construction activities would involve a slight increase in vehicular traffic for six months. Minimal impacts on traffic patterns around the site would be expected. Operational activities would involve ten additional truck shipments per day, accounting for about 4% of the existing traffic at the POTB.

SOCIOECONOMIC RESOURCES: Construction and operational activities would not create any measurable impacts on the local workforce or the population.

SAFETY AND HEALTH: HUMANS AND CATTLE: Construction and operation would not result in any noticeable change from existing human safety and health conditions. Periodic testing of the raw manure and the processed manure (nutrient-rich liquid) would be conducted to monitor pathogen levels and to prevent the potential spread of animal diseases between farms.

FLOODPLAINS AND WETLANDS: Wetlands are not present in the project area, and activities would not involve floodplains.

FLORA AND FAUNA: Consultation with the U.S. Fish and Wildlife Service has confirmed that neither endangered or threatened species nor their habitat would be affected by the proposed project.

CULTURAL RESOURCES: Consultation with the Oregon State Historic Preservation Office has confirmed that the proposed project would not adversely affect a local historic property, Hanger B at the POTB Industrial Park.

SOILS AND GEOLOGY: Construction and operational activities would not disturb any adjacent soils.

NOISE: Construction and operational activities would not elevate the existing noise levels of the Industrial Park.

PUBLIC PARTICIPATION: The Draft EA was distributed for review and comment to officials of Federal and State agencies and to the public; copies were made available for review at the Tillamook County Library and the Tillamook Campus Library. A public notice was placed in the Headlight Herald, the local newspaper, to announce availability of the document for public review and comment.

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The Oregon State Historic Preservation Office (SHPO) formally recalled a previous determination of 'No Historic Properties Affected' (letter dated October 22, 2001). A local property, the Tillamook Naval Air Station Museum (also termed "Hangar B") is a listed property on the National Register of Historic Places. The Oregon SHPO requested that the DOE expand the analysis of potential visual and olfactory impacts from the POTB Dairy Digester Project. Upon completing the additional analysis and delivery of the Section 106 consultation form required by the State of Oregon under the National Historic Preservation Act, the SHPO issued a final determination of 'No Historic Properties Adversely Affected' (letter dated December 26, 2001).

This FONSI, and the EA on which it is based, will be distributed to all persons and agencies known to be interested in or potentially affected by the proposed action. Additional copies of the FONSI and EA may be obtained from the National Energy Technology Laboratory at the address previously identified.

DETERMINATION: Based on information and analyses in the EA, DOE has determined that the proposed Federal action, to provide funds for construction and operation of a dairy digester for about 2,000 cows, would not constitute a major Federal action that would significantly affect the quality of the human environment. Therefore, an Environmental Impact Statement is not warranted and DOE is issuing this FONSI.

ISSUED IN PITTSBURGH, PA, this 13th day of February, 2002.

Alice Q. Murphy

for Rita A. Bajura
Director
National Energy Technology Laboratory