

PMC-EF2a

(2010)

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

**RECIPIENT:**Forest County Potawatomi Community**STATE:** WI**PROJECT TITLE :** FCPC-Biogas Digester-Milwaukee County

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-00001 22	DE-EE0003074	GFO-0003074-005	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 primary source for the following analysis is the FCPC Milwaukee Biodigester and Biogas Energy Cogeneration Facility (Titus Energy Management Systems. Preliminary Draft #2, 09-27-10).

Project Description – FCPC proposes to develop a 2-megawatt biogas cogeneration system in Milwaukee, Wisconsin. The system would consist of a two or more continuous mix (or similar system) digester tanks, waste receipt facilities, holding and blending tanks, bio-solids processing facilities, biogas treatment and pressurization equipment, three 800-kilowatt engine generators. Heat from the generators would be captured and used to warm the digester tanks or dry bio-solids. The facility would be located on land owned by the FCPC. That land currently is used as a parking lot for the Potawatomi Bingo Casino.

Organic waste would be obtained from the Milwaukee metropolitan area. Likely sources of waste to be used include industrial/commercial food processing waste, restaurant waste, grease and cooking oil waste, industrial and commercial organic liquids, sewage sludge and manure, and landscaping waste. The Feasibility Report confirms that there are sufficient sources of waste in the area to support the system.

The system will require 64 to 88 tons of organic solid feedstock per day, or 23,200 to 32,000 tons per year. About 40 wet tons of bio-solids will be produced per day, consisting of 40% water and 60% (24 tons) solids. The bio-solids will require drying and processing prior to use as a fertilizer or other beneficial uses. At a minimum, dewatering of bio-solids will occur on the project site. Further processing may occur on site (e.g., drying, composting, blending, packaging), or the solids may be sold after dewatering and further processing would occur elsewhere prior to final beneficial use.

Potential Environmental Impacts:

The biodigester system would be installed in an approximately 200- by 300-foot paved area currently being used as a parking lot. There are no wetlands or vegetation on the project site. Therefore, there would be no or minimal impacts to biological resources, cultural resources, surface water, or groundwater. There would be no adverse effects to sensitive environmental resources as defined in 10 CFR 1021, Subpart D Appendix B.(4), including cultural resources, protected species, wetlands, special designation areas, or prime farmland.

Land Use – All equipment and facilities would be installed on land owned by the FCPC. Immediately to the north is an industrial facility operated by Cargill. To the northeast is a casino and to the east and west are parking lots and parking structures for the casino. To the south is a large rail yard, separated by a road and ditch.

According to the Milwaukee Citywide Policy Plan (City of Milwaukee, March 2010, <http://www.mkedcd.org/planning/plans/Citywide/index.html>), the project site and surrounding area are zoned for industrial and heavy industrial uses. Current use of the site is classified as commercial and surrounding uses are classified as industrial and transportation/communication/ utilities. Development of the biodigester system would result in the loss of some parking for the casino, but would be compatible with the local land use plan and zoning classification and would not affect the surrounding industrial land uses.

Air Quality – The proposed project would not result in an increase in indoor concentrations of potentially harmful substances and, as summarized below, would be permitted under the Clean Air Act as a minor source and would not require a conformity review.

According to the Feasibility Report, potential (maximum) annual combustion emissions (tons per year, TPY) from the three engine generators would be 62 TPY for NO_x, 76 TPY for CO, 19 TPY for VOCs, 5 TPY for PM, and 79 TPY for SO₂. Because annual emissions would be under 100 TPY (and 250 TPY for PM₁₀), the facility would be classified and permitted as a natural minor source, and would not require a permit under the Clean Air Act new source review and prevention of significant deterioration programs.

Milwaukee County, Wisconsin, is in nonattainment for two regulated pollutants, PM_{2.5} and 8-hour ozone (EPA Green Book). The county is classified as in moderate nonattainment for ozone; therefore per 40 CFR 93.154, DOE must determine whether a conformity review is required for the proposed project. As outlined in DOE's April 2000 report Clean Air Act General Conformity Requirements and National Policy Act Process, a conformity review is required if total predicted emissions for nonattainment pollutants would exceed specified thresholds. The predicted annual emission rates of ozone precursors (NO_x and VOCs) and PM are less than the threshold rates of 100 tons per year (per 40 CFR 93.153b). Thus a conformity review is not required for this project.

Odor – There are no residences near the proposed facility location that would be affected by odors generated from biodigestion and methane production. Odor from the facility may be detectable from patrons entering and leaving the nearby casino, which is owned by the project recipient.

Noise – The engine generators would be housed within a pre-cast concrete building, which would reduce sound emissions from the engines. The facility will be located in an industrial area that has no nearby residences and many existing sources of noises, including an adjacent rail yard and large heating and cooling equipment for the nearby casino. Thus, noise emissions from the proposed facility would not affect any residential receptors and would be compatible with the surrounding land uses.

Aesthetics – The appearance of the biodigester/cogeneration building and other equipment and structures would be compatible with the industrial setting of the area.

Traffic – The project site is adjacent to major streets with nearby access to highways (Interstates 94 and 43). Access to the site from major roads would be primarily along roads through industrial and commercial areas. Operation of the project will require the delivery of up to 88 tons per day of feedstock and removal of about 24 tons per day of bio-solids. Based on 5 to 10 tons per shipment (i.e., a medium to large commercial trucks), operations would require 12 to 23 shipments per day to deliver feedstock and remove bio-solids, and additional shipments likely would be required for delivery of other equipment and materials. This volume of traffic would have minimal impact on the streets adjacent to and near the project site.

Floodplains – According to the FEMA Flood Insurance Rate Map for the project site, the nearest floodway and 100 year floodplain is the Menomonee River canal 0.2 miles north of the project site.

Stormwater – The project site is paved and stormwater runoff is channeled into a stormwater retention basin on the FCPC property. Construction of the new facilities would not cause a change in the area of impermeable surfaces or volume of stormwater runoff.

Water Supply – According to the Feasibility Report, water demand for operation of the biodigester would be minor and would be obtained from the City of Milwaukee municipal system.

Water Discharge – Discharge of water from the biodigesters will require a Pollution Discharge Elimination System permit from Wisconsin. Prior to discharge, that water will be treated to remove solids and other materials, and to meet State water quality requirements.

Solid Waste – Construction waste would be disposed in a licensed, municipal solid waste disposal facility. Bio-solids would be treated prior to sale. The level of treatment would depend on the use of the planned use of the waste, and will be conducted to comply with State regulations for pathogen control.

Hazardous Waste – According to the Feasibility Report, the biodigester would not create any hazardous waste as part of the process, and no hazardous wastes will be stored on site.

Health and Safety – Construction and operation of the biodigesters and generators would not result in any unique or especially hazardous conditions. Production, treatment, and use of methane and generation of electricity are common industrial practices for which there are accepted and well understand health and safety measures. These practices will be implemented during construction and operation of the facility

Conclusion – The FCPC proposal to install and operate a biodigester and biogas cogeneration facility in an industrial/commercial site in Milwaukee involves the development of an energy-efficient industrial practice as included in category B5.1 of DOE's categorical exclusions applicable to specific agency actions. The proposed project meets the conditions that are integral elements of the classes of actions for that and similar categories (10 CFR 1021, Subpt. D, App. B), and would have minimal impacts on the environment. Therefore the project is categorically excluded under category B5.1.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Steve Blazek Date: 11/10/2010
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