



Department of Energy

Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

DOE/EA-1907

FINDING OF NO SIGNIFICANT IMPACT

**Western Plains Energy, LLC
Biogas Anaerobic Digester Facility
Oakley, Kansas**

AGENCY: U.S. Department of Energy, Golden Field Office

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: The U.S. Department of Energy (DOE) provided federal funding, appropriated under the American Recovery and Reinvestment Act of 2009, to the Kansas Corporation Commission (KCC) under the State Energy Program (SEP). KCC proposes to provide up to \$12 million of SEP funds to Western Plains Energy, LLC (WPE) for the purchase of associated equipment for WPE's proposed Biogas Anaerobic Digester Facility, (proposed project) located in Oakley, Kansas. WPE is also receiving funding under the United States Department of Agriculture's (USDA) Rural Business Cooperative Service's 9004 Repowering Assistance Program.

WPE proposes to use USDA and DOE funding to construct, purchase equipment, and operate a new Biogas Anaerobic Digester at WPE's existing Ethanol Facility, located at 3022 County Road 18, Grinnell Township (Oakley), Gove County, Kansas. The proposed facility will include a receiving building, digester, and related infrastructure. WPE will convert manure, food waste, thin stillage, grain dust and livestock slaughter waste, to biogas (methane) to be utilized as a replacement for natural gas. The estimated amount of feedstock utilized in the biogas facility is 555 tons of feedstock per day. The intent of the proposed project is to produce enough biogas to replace the average natural gas consumption at the existing ethanol plant. The proposed project has a total cost of approximately \$28 million.

Prior to the expenditure of federal funds, DOE and USDA must examine the potential environmental impacts of each agency's Proposed Action in compliance with NEPA.

The Environmental Assessment (EA) completed by USDA analyzed the potential environmental impacts associated with the proposed project. The EA was completed by USDA in response to WPE's application for funding under the USDA Rural Business Cooperative Service's 9004 Repowering Assistance Program. All discussion, analysis, and findings related to the potential impacts of construction and operation of WPE's Biogas Anaerobic Digester Facility are contained in the Final EA.

Based on the analysis in the EA, USDA issued a Finding of No Significant Impact (FONSI), which was published on August 29, 2011. Based on the Final EA and USDA



FONSI, DOE has determined that DOE's Proposed Action does not constitute a major Federal action that would significantly affect the quality of the human or natural environment within the meaning of the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*). Therefore, an environmental impact statement is not required and DOE is issuing this FONSI.

All discussion, analysis, and findings related to the potential impacts of construction and operation of the WPE biogas project are contained in the *Final Environmental Assessment for the Construction and Operation of a Proposed Biogas Anaerobic Digestion Facility at an Ethanol Plant, Oakley, Kansas* (DOE/EA-1907) (Final EA). The Final EA is hereby incorporated by reference.

DOE prepared this FONSI in accordance with NEPA, the Council on Environmental Quality regulations for implementing NEPA, as amended (40 CFR 1500–1508), and DOE NEPA regulations (10 CFR Part 1021).

ENVIRONMENTAL IMPACTS: The Final EA examined the potential environmental impacts of the Proposed Action and the No-Action Alternative.

USDA considered the following resources as part of the analysis: air quality, water quality and hydrology, solid waste management and hazardous materials, land use, transportation, natural environment/biological resources, socioeconomics and environmental justice, energy impacts, noise, safety and occupational health, utility infrastructure, and feedstock availability. DOE, as cooperating agency, incorporates the findings in USDA's Final EA into DOE's FONSI.

With regard to air quality, WPE's existing ethanol manufacturing facility received an Air Emission Source Class II Operating Permit in August 2005 and modified in 2007, 2008, 2009, and 2010. Class II emitters are considered minor sources. WPE currently employs the following air pollution control equipment: a thermal oxidizer which collects emissions from various processing tanks and equipment; two fabric filter baghouses for controlling particulate emissions from grain unloading and processing; two fabric baghouse for controlling particulate emissions from hammermills; one flare for controlling natural gas vapors; a packed bed scrubber for removing Volatile Organic Compounds (VOCs) from carbon dioxide produced during processing; and a cyclone collector for cooling and separating dried distillers grains and soluble. The implementation of the proposed project will require an amendment to the existing permit; however, both WPE facilities will continue to be classified as a minor source emitter. For these reasons, DOE concludes that the project will have a minimal impact on air quality.

With regard to water quality and hydrology, WPE currently has a Kansas Water Pollution Control Permit (I-SA24-PO01) and Authorization to Discharge under the National Pollutant Discharge Elimination System (NPDES). These permits cover stormwater management and discharge and include a Stormwater Pollution Prevention Plan (SWPPP) for the existing ethanol facility. WPE will comply with its General Permit for Construction Activities and will add the new facility to its existing SWPPP. The current

design of the proposed facility does not anticipate the need to discharge water into the environment. Additionally, the new facility will not increase groundwater use at the facility. Therefore, DOE concludes that the proposed project will have no impact on water quality.

With regard to solid waste management and hazardous materials, currently there is minimal solid waste generated at the existing ethanol facility and this level of waste will only increase negligibly at the proposed facility. All waste generated at the proposed facility will be transported and disposed of properly in accordance with federal, state, and local regulations. WPE is currently classified as a Resource Conservation Recovery Act (RCRA)-Conditionally Exempt Small-Quantity Generator (CESQG), which means that it generates less than 55 lbs of hazardous waste per calendar month. The proposed facility will fall under WPE's existing EPA and RCRA number. Operation of the proposed facility will also substantially reduce the amount of land-applied waste (manure) from regional beef cattle feedlots. Therefore, DOE concludes that the proposed project will lead to a minimal increase in solid and hazardous wastes and have will a beneficial impact by reducing the amount of land-applied waste from regional feedlots.

With regard to land use, the area of the proposed facility will be located on a 60-acre parcel of land that includes the existing ethanol plant. The proposed facility site is currently vacant agricultural land (approximately 18-acres of which would be used for the proposed facility and related infrastructure). The proposed expansion of the existing site to include the proposed facility is compatible with the site's existing use. Therefore, DOE concludes that the proposed project will have a negligible impact on land use.

With regard to transportation, the proposed project site on Old Highway 40 and County Road 18 and is accessible by both roadways. Old Highway 40 is located approximately one-mile north of U.S. Highway 70 (also known as Interstate-70). Typical traffic flow in the proximity of the proposed site on weekdays consists of rural residential travel, agricultural trucks and employee traffic, corn/milo/grain receiving and shipping, wet and dried distillers, gasoline/diesel fuel delivery, ethanol shipment via tanker truck and dedicated rail related to the existing facility. The proposed expansion will not require new private on-site roads, public roads, or roadway improvements. The proposed facility will utilize approximately 555 tons of manure from Pioneer Feedyard, requiring approximately 25 truckloads of manure per day into the proposed facility, and 5 truckloads of dry fertilizer being returned to the Pioneer facility. The proposed facility will require approximately 15 additional passenger cars per day. Due to the existing level of traffic at the existing facility, the increase in traffic related to the proposed project is minor. Therefore, DOE concludes that the proposed project will have a minimal impact on transportation routes and traffic patterns.

With regard to natural environment/biological resources, WPE's site primarily consists of successional weedy species. The proposed facility site location is highly disturbed by past clearing and conversion of the native vegetation and does not appear to provide suitable habitat for wildlife species. Therefore, DOE concludes that the proposed project will have no impact on biological resources.

With regard to socioeconomics and environmental justice, the population in Gove County is approximately 2,480 people and during the last 10 years has had a population decline of 19.2 percent. The percent of persons in Gove County living below the poverty level in 2004 was 9.9 percent. The largest minority group in Gove County consists of Hispanic or Latino heritage (1.9 percent). Vendors and contractors involved in the construction phase of the proposed project will be required to adhere to Equal Opportunity Employment (EOE) and Affirmative Action considerations as identified in 29 CFR 1608.1. Construction-related jobs are anticipated to be in the range of 90 to 100 workers. Operation of the proposed project would add approximately 15 personnel. Therefore, DOE concludes that the proposed project will have no or a slightly beneficial impact on socioeconomics and on minority or low-income workers.

With regard to energy impacts, the existing WPE ethanol facility is serviced by electricity and natural gas. These utilities will remain in place and will be maintained to service the proposed facility. The proposed project's ultimate goal is to replace an estimated 91 to 100 percent of the base fossil fuel load (predominately natural gas) utilized by the existing ethanol facility. Therefore, DOE concludes that the proposed project will lead to a minor increase in energy utilization at the site and will have a beneficial impact by reducing reliance on fossil fuels at the existing facility.

With regard to noise, there are no noise ordinances and/or regulations in place for Gove County. However, WPE will continue its practice of adhering to OSHA occupational safety and health standards. Mechanical systems utilized in the design of the proposed facility will be in accordance with the OSHA guidelines. During the construction phase of the proposed project, operation of power equipment and other construction machinery will result in a temporary increase in the noise levels in the immediate vicinity of the subject site. Noise impacts during the construction phase of the proposed project will be temporary and will only occur during designated daylight hours. Operation of the proposed facility is expected to only negligibly add to the existing noise levels at the project location. DOE concludes that the proposed project will cause a negligible increase in noise levels.

With regard to aesthetics, the project site is located in a predominantly rural, agricultural area of Gove County. Construction of the proposed facility will have short-term visual impacts related to the staging of construction equipment. The proposed design of the new facility will be integrated into and compatible with the existing facility. Two residential farmsteads have the proposed project site within their viewsheds. The proposed facility will be similar in design to the existing facility and will be painted in non-abrasive tones. The grounds of the project site will be well-maintained. Therefore, DOE concludes that the proposed project will have a negligible impact on aesthetics.

With regard to safety and occupational health, WPE currently has a Safety and Health Program Guide in place for its existing facility and this guide will also apply to the proposed facility operations. WPE has security consisting of a closed-circuit television monitoring system around the perimeter of the property and strategic locations inside the

existing building. The proposed facility will incorporate the installation of additional cameras. All mechanical systems of the proposed development will be designed in accordance with the National Fire Protection Association (NFPA) guidelines. Construction and operation of the proposed project would not involve the transportation, storage, or use of radioactive, explosive, or toxic materials and would not offer any particularly attractive targets or opportunities for terrorists or saboteurs to inflict adverse impacts on human life, health, or safety. Therefore, DOE concludes that the proposed project will not have an adverse effect on the safety and occupational health of employees or the public.

With regard to utility infrastructure, the proposed facility's infrastructure will consist of primary digesters, secondary digesters, tertiary digesters, biogas conditioning equipment, a process water area, a high-solids infeed system and an office control room. A pipe containing thin stillage will be piped from the existing facility to the proposed facility and the biogas produced by the proposed facility will be piped to the existing facility for use in the boilers. Nutrient rich process water, a by-product of the proposed project, will either be recycled back into the system or used as irrigation water and land applied or packaged onsite into fertilizer. The proposed facility will use the following utilities, which it would share with the existing facility: electric, water/wastewater, and natural gas. Therefore, DOE concludes that the proposed project will have a minimal impact on utility infrastructure at the project site.

With regard to feedstock, the proposed project will utilize up to 555 tons of feedstock per day. The primary feedstock supply is manure from Pioneer Feedyard, located approximately 5 miles away; any other feedstock sources will be sourced within a 100-mile radius. Feedstock will be delivered, via end dumps, to an on-site building which contains the feeding system for the facility. Feedstock will not be stored outside. In addition to the use of manure as a feedstock, thin stillage will be piped from the existing facility to the proposed facility.

PUBLIC PARTICIPATION IN THE EA PROCESS:

USDA published the Final EA and FONSI on the USDA website on September 1, 2011. USDA published a notice of availability in the local paper for Gove County. The public comment period ended October 1, 2011. USDA received no comments on the Final EA or FONSI.

DETERMINATION: Based on the information in the Final EA (DOE/EA-1907), DOE determined that the Proposed Action would not constitute a major Federal action significantly affecting the quality of the human environment in the context of NEPA. Therefore, preparation of an environmental impact statement is not required, and DOE is issuing this FONSI.

The State of Kansas must ensure its sub-recipient, WPE, complies with the appropriate regulatory and permitting requirements, and implements best management practices and other committed-to measures that are identified in the EA or this FONSI.

The Final EA and FONSI are available on the DOE Golden Field Office Reading Room website at http://eere.energy.gov/golden/Reading_Room.aspx and the DOE NEPA website at http://nepa.energy.gov/DOE_NEPA_documents.htm.

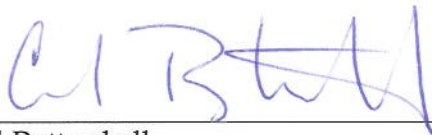
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