



Department of Energy

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

DOE/EA 1790

FINDING OF NO SIGNIFICANT IMPACT
CONSTRUCTION AND OPERATION OF THE HETEROGENEOUS FEED
BIOREFINERY
ENERKEM CORPORATION
PONTOTOC, MISSISSIPPI

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

ACTION: Finding of No Significant Impact

SUMMARY: The U.S. Department of Energy (DOE) is proposing to authorize expenditure of *American Recovery and Reinvestment Act of 2009* (Recovery Act) funding to Enerkem Corporation (Enerkem) to complete final design, construction and initial operation of a 330 ton-per-day gasification-to-ethanol biorefinery. Enerkem proposes to locate the proposed biorefinery within the existing boundaries of the Three Rivers Solid Waste Management Authority (TRSWMA) landfill in Pontotoc County Mississippi and use as feedstock, the dried and post-sorted biomass fraction of their municipal solid waste and wood biomass. The proposed biorefinery would consume approximately 116,000 dry tons of post-sorted municipal solid waste (MSW) per year and would produce approximately 10 million gallons of ethanol per year for commercial sale.

All discussion, analysis and findings related to the potential impacts of constructing and operating the proposed biorefinery including the Enerkem-committed environmental protection measures are documented in the Final EA. The Final EA is hereby incorporated by reference.

This FONSI was prepared in accordance with the *National Environmental Policy Act of 1969* (NEPA), the Council on Environmental Quality regulations for implementing NEPA, as amended, 40 CFR 1500 to 1508, and DOE NEPA regulations 10 CFR 1021.322.

ENVIRONMENTAL IMPACTS: In compliance with NEPA and the DOE NEPA implementing regulations, the EA examined the potential impacts of DOE's decision to authorize Enerkem to expend Recovery Act funds for the proposed project and also examined a No-Action alternative. Under the No-Action alternative, DOE would not authorize expenditure of Recovery Act funds for the proposed project and Enerkem would not design, construct or operate the proposed biorefinery.

The EA describes and analyzes potential impacts on the environment that could result from construction and operation of the proposed biorefinery on the following resource areas: land use; air quality; noise; visual and aesthetic resources; geology and soils; utilities and energy; water resources; biological resources; cultural resources; socioeconomics; environmental justice; public and occupational safety and health; waste management and hazardous materials; and transportation, as well as any cumulative impacts of the proposed project. DOE determined that



there would be no adverse impacts or that the impacts would be small, temporary, or both for all resource areas.

Air quality, which was an area of concern in the one public comment letter received in response to the Scoping Notice, was addressed and analyzed in the EA. Pontotoc County is an attainment area for all criteria air pollutants and registers consistently below U.S. Environmental Protection Agency (USEPA) standards. Several fuel-fired units of the proposed biorefinery would generate emissions of Volatile Organic Compounds (VOCs) and hazardous air pollutants (HAPs), including acetaldehyde, formaldehyde, and methanol. Enerkem would control these pollutants by venting the exhaust gases from these processes through a wet scrubber that would remove approximately 95 percent of the VOCs and 75 percent of the HAPs. Process chemical and product storage tanks would also generate emissions of VOCs and HAPs. Estimated total emissions for criteria air pollutants, VOCs, and HAPs would be within the limits requiring a minor source permit. Enerkem would obtain a minor source permit prior to construction.

Operations of the proposed project would result in odor emissions, primarily from receiving, pretreatment (drying), and handling MSW and forest biomass residues. Generally, odors related to degrading MSW would be consistent with the current operations of the TRSWMA; however, the odor due to operation of the proposed project may increase minimally due to the preparation of the feedstock material. To keep the operational odors to a minimum, Enerkem would process each day's material and return any in excess of its processing ability to the landfill. In addition, Enerkem would install odor controls on the feedstock receiving building.

PUBLIC PARTICIPATION IN THE EA PROCESS: In accordance with applicable regulations and policies, DOE sent a scoping notice on June 9, 2010, to federal, state, and local agencies; tribal governments; elected officials; businesses; organizations and special interest groups; and members of the general public providing 30 days to submit comments regarding the EA's scope. DOE published the Scoping Notice online at the DOE Golden Field Office Public Reading Room. The recommended avenues of inquiry within the letters were addressed within the EA. One letter was received from the public on the Scoping Notice.

DOE published the draft EA online at the DOE Golden Field Office Public Reading Room for a 15-day review period which ended September 7, 2010. Copies of the Notice of Availability (NOA) were mailed to identified stakeholders and the NOA was published online at the Golden Field Office Public Reading Room. DOE received no additional comments during the comment period.

DETERMINATION: Based on the information presented in the Final EA (DOE/1790), DOE determines that authorizing Enerkem to expend Recovery Act funding for final design, construction and operation of the proposed biorefinery would not constitute a major federal action significantly affecting the human or natural environment, as defined by the National Environmental Policy Act (NEPA).

Enerkem's commitment to obtain and comply with all appropriate federal, state, and local permits required for construction and operation of the biorefinery, and to minimize potential impacts through the implementation of best management practices and various applicant-committed measures detailed in the EA, shall be incorporated and enforceable through DOE's financial assistance agreement.

Therefore, the preparation of an Environmental Impact Statement is not required, and DOE is issuing this Finding of No Significant Impact (FONSI). Subject to any other conditional provisions, this FONSI informs DOE's decision to authorize release of its cost-shared funding for the design, construction, and operation of the Enerkem Heterogeneous Feed Biorefinery near Pontotoc, Mississippi.

Copies of the Final EA are available at the DOE Golden Field Office Public Reading Room website at http://www.eere.energy.gov/golden/Reading_Room.aspx. For questions about this FONSI, please contact:

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For further information about the DOE NEPA process, contact:

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