



November 2008

EPA's Landfill Methane Outreach Program Meeting the Needs of Corporate Energy Users

The U.S. Environmental Protection Agency's (EPA's) Landfill Methane Outreach Program (LMOP) is committed to helping corporate energy users develop and promote landfill gas energy (LFGE) projects. LMOP is a voluntary assistance and partnership program that promotes the use of landfill gas as a renewable energy resource. By preventing emissions of methane—a powerful greenhouse gas—through the development of LFGE projects, LMOP helps businesses, states, and communities protect the environment and build a sustainable future.

LMOP works in partnership with corporations to gain a greater understanding of their energy needs and environmental goals. LMOP also provides opportunities to pass on advice and information and identifies possible areas for further collaboration.

LMOP Works Hands-on with Companies Considering and Using LFG

- LMOP approached *BMW Manufacturing Corporation* (BMW) about using LFG at its Greer, South Carolina manufacturing plant after identifying a nearby candidate landfill. Following assistance from LMOP and program Partners with technical and permitting issues, BMW's LFG-fired turbines came online in 2003 to produce 25 percent of the plant's electricity and up to 100 percent of its thermal needs. BMW anticipated a savings of more than \$1 million per year, as well as providing a hedge against fluctuating natural gas prices. In 2006, BMW began using additional LFG to fuel 23 paint shop oven burners and a boiler; now LFG contributes 63 percent of the plant's overall energy needs. BMW estimates that the plant has saved \$8 million in energy costs since 2003. BMW was the recipient of LMOP's 2003 Project of the Year Award and our Energy - End User Partner Award for 2006.

"The General Motors Fort Wayne Assembly Plant is actively involved in finding new and inventive ways to help the environment and reduce energy cost. A constructive relationship with the EPA's Landfill Methane Outreach Program provides such a means to accomplish GM's goals. Working together, both parties are able to achieve the benefits of using a renewable energy source while improving the environment in the communities where we live and work. I would highly recommend using the knowledge and resources available through the EPA's Landfill Methane Outreach Program."

David Shenefield
Site Utilities Manager, General Motors

- LMOP provided *General Motors Corporation* (GM) with assistance related to permitting issues, promotional support, and public recognition for its LFGE development efforts at four assembly plants. At a GM truck assembly plant near Fort Wayne, Indiana, EPA supplied certificates of recognition and assistance for a project ribbon-cutting ceremony. In addition, GM's plant in Lake Orion, Michigan received LMOP's 1999 Project of the Year Award. In 2003, GM received LMOP's Energy Partner of the Year Award. GM expects a savings of more than \$500,000 per year for each project.
- *Jenkins Brick*, a 100-plus year-old, 5th-generation managed brick manufacturing and distribution company, contacted LMOP for assistance in siting a new facility in close proximity to a landfill in order to utilize LFG in its brick kilns. The company had been reaping the benefits of LFG use for several years at its plant in Montgomery, Alabama. Through discussion with Jenkins Brick about the expected energy needs and potential locations for its new Jordan Plant and careful searching of LMOP's landfill database, the best candidate

Achieving Environmental and Energy Benefits

Together, the environmental and energy benefits achieved in 2008 through LFG use at BMW's facility in South Carolina, GM's four plants, Jenkins Brick's two facilities in Alabama, and SC Johnson's Wisconsin facility are equal to:

- Annual greenhouse gas emissions from 61,000 passenger vehicles; or
- Carbon sequestered annually by 76,000 acres of pine or fir forests; or
- Carbon dioxide emissions from nearly 780,000 barrels of oil consumed; and
- Powering 4,800 homes and heating 36,000 homes

was found in the Veolia Star Ridge Landfill in Moody, Alabama. LMOP provided materials support for and EPA representatives attended the project's ribbon-cutting event. Jenkins Brick also won LMOP's Project of the Year Award for 2006. Initially, 40 percent of the Jordan Plant's energy needs were expected to be fulfilled by LFG, increasing to perhaps 100 percent in 10 years.

- When *SC Johnson* converted its longstanding LFGE project from a boiler operation to a combined heat and power application, permitting issues arose that endangered the project. LMOP helped SC Johnson overcome the barriers by identifying and working with appropriate parties at the regional and national level. Since 2003, SC Johnson has produced LFG-generated electricity and steam for its Racine, Wisconsin plant and has realized an estimated \$1 million in net savings per year.

LMOP offers a broad range of products and services that can be customized to help meet the particular needs of your company's facility and energy managers, marketing and media relations professionals, and other key decision makers.

Project Evaluation. LMOP can provide your company with targeted, project-specific support. For example, LMOP can generate tailored LFG modeling analyses, conduct preliminary feasibility studies, and assess the economic feasibility of specific LFGE projects. LMOP has also developed LFGcost, a tool that LMOP uses to help Partners evaluate the economic

and technical feasibility of many LFG technologies, including turbines, reciprocating engines, and direct gas use systems.

Project Financing. LMOP helps companies think creatively about funding options and find answers to tough financing questions. LMOP's *Funding Landfill Gas Energy Projects: State, Federal, and Foundation Resources* offers information on innovative state, federal, and foundation funding resources for LFGE projects, such as low-interest loans, grants, production incentives, and property, sale, and use tax exemptions.

Technical Resources. LMOP offers products and services that can guide companies through the LFGE project development process once the feasibility of a project has been established. These include the *LFGE Project Development Handbook*, which provides step-by-step project development guidance, including gas modeling, selection of LFGE technologies, economic analysis, contract considerations, and choosing project partners. In addition, LMOP offers technical fact sheets on a range of topics, including how to adapt boilers to utilize LFG and using microturbines powered with LFG.

Project Marketing. LMOP will recognize your company's participation in LFGE projects and commitment to the environment. LMOP provides templates for customized posters and brochures, participates in ribbon-cutting events, and helps develop and place articles in the national and local press. In addition, LMOP has developed a Web-based Communications Toolkit, where Partners can download marketing and outreach materials—such as flyers, posters, and press releases—and customize them to promote their own LFGE projects.

Regulatory and State Partner Assistance. LMOP works closely with our Partners to stay on top of critical issues affecting the LFG industry. Through our online newsletter and other timely communications, LMOP provides Partners with the most current information on regulatory and legislative initiatives, LFGE project funding opportunities, and renewable energy market developments. LMOP is committed to discussions with federal, state, and local regulators to smooth potential permitting hurdles and address right-of-way concerns. LMOP can connect your company with our network of federal, state, and local regulatory contacts to help overcome barriers to LFGE project implementation.

Join the LMOP Network!

Become an LMOP Partner today by signing a voluntary memorandum of understanding. For more information about LMOP, visit our Web site at www.epa.gov/lmop.

For assistance, please e-mail or call Rachel Goldstein (goldstein.rachel@epa.gov, 202-343-9391).