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# Landfill Gas Energy

## Fueling the Economy and a Sustainable Energy Future While Improving the Environment

Landfill gas (LFG) energy projects have been around since the late 1970s, providing sustainable renewable energy in the form of electricity and renewable fuel to citizens, businesses, and industry. In 2007 alone, more than 440 operational LFG energy projects in 42 states supplied:

- 11 billion kilowatt-hours of electricity, and
- 78 billion cubic feet of LFG to end users.

The estimated annual environmental benefits associated with these operational projects are equivalent to:

- Carbon sequestered annually by 17,500,000 acres of pine or fir forests, or
- CO<sub>2</sub> emissions from 179,000,000 barrels of oil consumed, or
- Annual greenhouse gas emissions from 14,000,000 passenger vehicles, or
- CO<sub>2</sub> emissions from burning 400,000 railcars' worth of coal.

LFG energy projects also have a substantial impact on economic growth and cost savings. A typical 3 megawatt LFG electricity project is estimated to have the following national benefits (direct, indirect, and induced) during the construction year:

- Increase the output of the U.S. economy by nearly \$14 million (\$3 million is local and mostly employee earnings).
- Employ nearly 70 people (expressed in full-time equivalents per year).

These projects bring significant cost savings and long-term energy price stability to LFG end users:

- BMW Manufacturing has saved \$8 million since 2003 at its plant in Greer, South Carolina.
- General Motors' current 4 direct-use LFG energy projects save the company a total of over \$2 million per year.
- SC Johnson estimates \$1 million in net savings per year at its plant in Racine, Wisconsin.
- The NASA Goddard Space Flight Center saves taxpayers nearly \$400,000 per year with its LFG energy project in Greenbelt, Maryland.

However, much remains to be done. EPA estimates that at least 520 other landfills present economically attractive opportunities for LFG energy project development, with the potential to generate an additional 1,200 megawatts or 13,000 million British thermal units per hour (MMBtu/hr).

LFG energy—utilizing an otherwise wasted resource to benefit the environment and the economy!

EPA's Landfill Methane Outreach Program (LMOP) is a voluntary assistance and partnership program that promotes the use of LFG as a renewable energy resource. By preventing emissions of methane—a powerful greenhouse gas—through the development of LFG energy projects, LMOP helps businesses, states, and communities protect the environment and build a sustainable future. Over the past thirteen years, LMOP has assisted in the development of over 360 LFG energy projects. As of December 31, 2007, LFG energy projects with LMOP involvement have cumulatively prevented more than 4.5 million tons of methane from entering the atmosphere. For more information about LMOP, visit [www.epa.gov/lmop](http://www.epa.gov/lmop).