

Ohio Biomass Energy Program

Summer 2007

Promoting the development of renewable energy resources in Ohio, including wood and agricultural residues; ethanol and biodiesel biofuels; landfill gas to energy; and energy crops.

Gov. Strickland announces plan for electric industry

On August 29, Gov. Ted Strickland announced his Energy, Jobs and Progress plan to ensure affordable energy prices in the years to come. The plan would give the Public Utilities Commission of Ohio (PUCO), which houses the Ohio Biomass Energy Program, an increased role in the electric industry and bring new jobs to the state. The governor's plan also supports alternative resources for electric generation, creating an advanced energy portfolio standard that calls for at least 25 percent of the electricity sold in Ohio to be generated from advanced energy technology by 2025.

Gov. Strickland's proposal has three objectives and lays the foundation for upcoming legislation:

- ◆ *Ensure affordable and stable energy prices to protect Ohio consumers before PUCO-approved rate stabilization plans end in December 2008.*

The governor's plan proposes a "hybrid" approach to electricity regulation and includes a market-based pricing option contingent upon the development of a competitive market. The plan would allow utilities to opt for an electricity security plan, giving the PUCO responsibility for approving rates based on the utilities' actual operating costs.

- ◆ *Attract jobs through an Ohio advanced energy portfolio standard.*

The plan's advanced energy portfolio standard will bring the energy jobs of the

future to the state, creating new opportunities for thousands of Ohioans. It requires that at least 25 percent of the electricity sold in Ohio must be generated from advanced energy technology by 2025, and no less than half of that advanced energy must be created in Ohio.

- ◆ *Safeguard Ohioans by empowering consumers and modernizing our energy infrastructure.*

The plan would protect families by providing greater efficiency, corporate transparency and customer service from Ohio's electric utilities. This would be accomplished by encouraging the modernization of Ohio's energy infrastructure to the benefit of consumers and the state's economy.

The complete text of Gov. Strickland's remarks is available at www.governor.ohio.gov. Look to www.PUCO.ohio.gov in the near future for additional information about the Energy, Jobs and Progress plan and legislation that is sure to follow. ◆



The Ohio Biomass Energy Program

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World's largest landfill gas-to-pipeline facility operating in Cincinnati

Ohio is now home to the world's largest landfill gas-to-pipeline energy production facility at the Rumpke Sanitary Landfill in the Cincinnati area.

Montauk Energy Capital, Rumpke Consolidated Companies, Inc. and Duke Energy are providing the Cincinnati area with a significant local, renewable source of energy. Montauk's subsidiary, GSF Energy, was an early industry pioneer in the conversion of landfill gas to pipeline quality gas when the first of the three plants now operating at the Rumpke Sanitary Landfill was installed in 1986. Montauk's newest plant, formally dedicated on June 11, 2007, increases its production capacity at the Rumpke Sanitary Landfill by 60 percent.

The landfill gas (LFG) produced naturally in the landfill is collected through a system of vertical gas wells located throughout the landfill. The LFG is then piped to Montauk's gas processing facilities located at the base of the landfill. Here the LFG is refined to meet the pipeline specifications of Duke Energy prior to entering its distribution system.

The primary technology used to convert the LFG to pipeline quality high Btu gas is pressure swing adsorption (PSA) which separates carbon dioxide from the LFG stream. LFG contains roughly 50 percent carbon dioxide. Removing the carbon dioxide from landfill gas is the primary process step in its conversion to pipeline quality gas.

The total processing capacity is now 15 million cubic feet at the plant inlet. At this level, Duke Energy can serve 25,000 Cincinnati homes annually with natural gas provided by Montauk. Currently, this level of production provides 7 percent of Duke's gas volume for their service area, and is the company's only local gas source.

The adage that one person's trash is another's treasure certainly applies here. In this case, the public also benefits from the use of a domestic energy resource that offsets the use of nonrenewable fossil fuels and reduces greenhouse gas emissions.

For additional information, contact Dan Bonk of Montauk Energy at DBonk@montaukenergy.com. ♦



Executives from Montauk Energy Capital, Rumpke Consolidated Companies, Inc. and Duke Energy celebrate at the ribbon cutting ceremony for the landfill gas-to-pipeline plant on June 11.

(photo courtesy of Montauk)



The landfill gas-to-pipeline plant at the Rumpke Sanitary Landfill in Cincinnati uses technology to convert gas produced naturally in the landfill to natural gas that is used by Duke Energy customers in Cincinnati.

(Photo courtesy of Montauk)

Bioenergy research receives Department of Energy funding

In June, the U.S. Department of Energy (DOE) announced plans to invest up to \$375 million for three new Bioenergy Research Centers to further develop cellulosic ethanol and other biofuels. The Centers will be located in Oak Ridge, TN; Madison, WI; and Berkeley, CA and will work to further President Bush's "Twenty in Ten" initiative, which aims to reduce U.S. gasoline consumption by 20 percent within 10 years.



One of the major goals of the Centers will be to make cellulosic ethanol cost-competitive with gasoline. In order to accomplish this, researchers will work on ways to re-engineer the biological processes to develop more efficient processes for converting plant cellulose into ethanol or biofuels. This research will also help to identify feedstocks other than corn that can be used in biofuels production. Industry experts believe that in order for biofuels to be successful in the future, production will need to use additional feedstocks such as agricultural residues, grasses, inedible plants and the non-edible portion of crops.

Researchers from 18 universities, seven DOE laboratories, and additional nonprofit organizations and private companies will work together in the Centers. The Centers are expected to begin work in 2008.

For more information about DOE energy initiatives, visit www.eere.energy.gov. ♦

Electric green pricing power programs give customers option to support renewables

As the Public Utilities Commission of Ohio (PUCO) continues to work toward a competitive retail electric market, the Commission has approved pilot programs to give customers of AEP-Ohio, Duke Energy Ohio and FirstEnergy the opportunity to support the generation of electricity from alternative fuel sources. Customers who participate in the programs will be able to purchase Renewable Energy Certificates (RECs), which represent a quantity of electricity produced from alternative resources.

AEP-Ohio Green Pricing Program

AEP-Ohio began its Green Pricing Program in September. To determine the price of its green power option, AEP-Ohio purchased RECs through a national competitive bidding process overseen by the PUCO. The price set by a competitive bid is 70 cents per 100 kWh worth of RECs. For the minimum participation level of 200 kWh, customers will pay \$1.40 premium per month. AEP-Ohio plans to offer the pilot program through Dec. 31, 2008.

To be part of the RECs purchased for the AEP-Ohio program, electricity must be generated from facilities that were brought into service in or after 1997 that use resources including wind, solar photovoltaic, biomass agriculture and energy crops, hydroelectric, coal mine methane, landfill gas, biogas digesters and wood waste.

Duke Energy GoGreen pilot program

Duke residential customers who choose to participate in the *GoGreen* pilot program will pay a minimum of \$5 extra on their electric bill to purchase two "blocks" of RECs each month, which amounts to approximately 200 kWh of electricity generated from renewable sources. Additional blocks of 100 kWh can be purchased for \$2.50 per month. Duke will offer the pilot program through the end of 2008.

The RECs purchased in Duke's program will include electricity generated from sources brought on-line since Jan. 1, 1997 that use resources including wind, solar, photovoltaic, landfill gas, biogas digesters, hydroelectric, coal mine methane, landfill gas, biomass and biogas digesters.

Non-residential customers will also have the opportunity to participate in the *GoGreen* program through the purchase of RECs and carbon credits, which are units that represent the reduction in the release of greenhouse gas.

FirstEnergy Green Resource Program

FirstEnergy customers can support the development of alternative resources through the Green Resource Program.

A competitive bidding process will be used to determine the price of RECs, which customers can purchase. The minimum level of participation is set at 200 kWh worth of Green Resource product per month. Customers who choose to participate in the program will continue to pay the same rate for electricity as non-participants, plus a Green Resource tariff rider for each 100 kWh block purchased. FirstEnergy will inform customers about the Green Resource Program through a bill insert.

To learn more

Participation in the green pricing programs helps ensure that more electricity from alternative energy sources is added to the national electric grid.

The PUCO will continue to monitor the programs as they are implemented by AEP-Ohio, Duke and FirstEnergy. Customers who are interested in enrolling should contact the company, and more information about the programs is available at www.PUCO.ohio.gov. For information about the approved cases, visit the Docketing Information System and enter case number 06-1153-EL-UNC for AEP-Ohio, 06-1398-EL-UNC for Duke and 06-1112-EL-UNC for FirstEnergy. ♦

Ohio Biomass Program to be at the 2007 Farm Science Review

The annual Farm Science Review agricultural fair will be held on Sept. 18-20 in London, Ohio. The Ohio Biomass Program will distribute information along with the Public Utilities Commission of Ohio (PUCO) and Ohio Power Siting Board (OPSB). Last year, more than 600 exhibitors from all over North America participated in the Farm Science Review.



Staff from the PUCO, OPSB and Biomass Energy Program will be at the Farm Science Review from Sept. 18-20.

In addition to exhibits and organizations promoting ethanol and biodiesel fuels, there are numerous vendors of outdoor wood boilers, corn furnaces, and indoor corn and wood pellet stoves. The growing interest in this equipment, especially in rural areas where the biomass sources are grown, is being fueled by rising propane, natural gas and oil prices.

In 2007, under an agreement with U.S. EPA, key manufacturers have agreed to make outdoor wood-fired heaters about 70 percent cleaner. To learn more about cleaners models and best burn practices, go to <http://www.epa.gov/woodheaters/>

For more information about the Farm Science Review, go to www.fsr.osu.edu. ♦

Save the Date: Upcoming Biomass Events

Renewable Energy from Organics Recycling

Presented by: BioCycle, cosponsored by the Great Lakes Biomass Regional Partnership

Oct. 1-3, 2007

Indianapolis, IN

www.jgpress.com

Ohio Solar Tour

Part of the ASES National Solar Tour

Oct. 5-7, 2007

Tours of renewable energy-powered and energy efficient homes and buildings will be held in various locations throughout Ohio. For more information, visit www.greenenergyohio.org.

Cellulosic Ethanol Summit

Oct. 15-17, 2007

Washington, DC

www.infocastinc.com/cell07.html

BBI Biofuels Workshop and Trade Show Series: Building an Industry

Presented by: BBI International

Western Region: Oct. 9-11, 2007

Portland, OR

Eastern Region: Nov. 28-30, 2007

Philadelphia, PA

www.bbibiofuels.com

Biomass '08: Power, Fuels, and Chemicals

Presented by: BBI International

April 15-18, 2008

Minneapolis, MN

www.bbibiofuels.com

Call for presentation abstracts open until Oct. 1, 2007.



Agricultural exhibits, biofuel information and the Ohio Biomass Energy Program will be part of the Farm Science Review, held Sept. 18-20 in London, Ohio.

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ADDRESS CORRECTION REQUESTED

