



# Ohio Biomass Energy Program

## Newsletter – December 2000

The **Ohio Biomass Energy Program (OBEP)** has been active on a number of fronts to promote the use of bioenergy in Ohio. In May 2000, the OBEP was the primary host with a number of other organizations for a U.S. Department of Energy, Office of Fuels Development sponsored workshop that explored the potential benefits of ethanol production plants for state economic development, agriculture, and the environment. Subsequent activities include an ongoing feasibility study for ethanol production

in the state, and installation of the first two commercial E-85 pumps in the Columbus area. The program is working with a local clean air group, Project Clear, and has also participated in the joint Great Lakes/Northeast States Working Group on the production and use of ethanol in the Northeast. Additionally, in a pilot project, the Ohio Department of Transportation is experimenting with biodiesel in its fleet.

## The Ohio Ethanol Workshop

The Ohio Ethanol Workshop, sponsored by the U.S. Department of Energy and supported by the Regional Biomass Energy Program, was held on May 10th, 2000 at the Vern Riffe Center in Columbus. The theme for the workshop was "Exploring Fuel Ethanol, Climate Change, Energy, and other Sustainability Issues." Over 55 various public and private sector representatives participated in the program. The workshop was a very positive, productive step toward fostering ethanol use and production in the state through education, information exchange, and developing public/private partnerships in Ohio.

A special feature of the workshop was the display of Cedarville College's Ethanol Vehicle Challenge Silverado and Malibu cars. The team was departing for the 2000 competition in Ottawa and as part of the send-off ceremonies, Joe Haines, Deputy Director, Ohio Department of Agriculture, presented a resolution from the Ohio Senate to Cedarville team representatives recognizing the program's achievements.

The morning program covered extensive background information, including a presentation by renowned expert Dr. Rattan Lal of The Ohio State University on carbon sequestration and global climate change issues. At lunch, Eric Vaughn, President of the Renewable Fuels Association, challenged the delegates to seize the opportunity and build an ethanol industry in the state that consumes more ethanol annually than any other in the country.



*PUCO Commissioner Don Mason*



*Cedarville team representatives*

The afternoon focused on information specifically applicable to Ohio. Programs in other states and existing Ohio incentives were discussed. To conclude and set a path for follow-up activities, Keith Stimpert of the Ohio Farm Bureau led a discussion on informing Ohio legislators about ethanol, and encouraging them to support the development of ethanol production in Ohio.



*Workshop Participants*

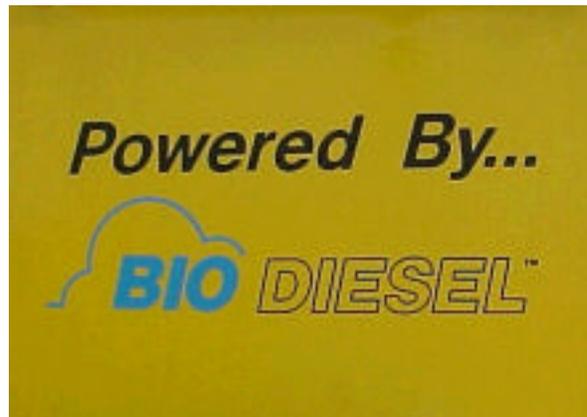
## **Biodiesel Use in Ohio**

The State of Ohio has long been a proponent of biodiesel, having tested and used the soy-based product in its fleet since 1996. The program started with two similar Ohio Department of Transportation (ODOT) county garages testing the fuel, one with B20 and the other with petroleum diesel, in side-by-side comparisons during 1996-97. The pilot evolved into a subsequent test program in one more county in 1998. The testing demonstrated that soy-based biodiesel was a viable year-round fuel for the ODOT vehicles.

Based upon these successes, in June 2000 the State executed the largest biodiesel contract in the US: a projected one million gallons of B20 annually for three years to be used by the ODOT fleet.

Since 1998, B20 has been an option for state fleets in complying with the federal Energy Policy Act of 1992 (EPACT). As the requirements for purchasing alternative fuel vehicles become more stringent each year, states can turn to biodiesel as part of their compliance strategy. States such as Ohio may now use biodiesel credits to satisfy up to 50% of the alternative fuel requirements, giving them flexibility and without having to purchase new vehicles or modify equipment. At least eight other states have begun using biodiesel for EPACT compliance in their fleets.

Ohio's biodiesel program is the most extensive and ambitious in the country, and may serve as a focal point for research and public awareness on clean diesel alternatives. Increased use of biodiesel in large state fleets will aid in the expansion of the market for this domestic,



renewable-based fuel, as well as demonstrate to other local, school and city bus fleets, or corporate fleets that it is a viable fuel alternative. With growth in demand and distribution of the product, costs will become increasingly competitive with rising petroleum based diesel price.

# Farm Science Review



*The Review - London, Ohio*



*Biomass Booth Visitors*

The annual Farm Science Review is a three-day outdoor agricultural trade show featuring a little bit of something for everyone, with 83 acres of exhibits which include tractors, tools, seeds, chemicals, and even financial services. Educational displays offer new ideas and new answers to old problems. Also, there are experts from The Ohio State University, government agencies and private industry to answer questions onsite. There were over 600 commercial exhibitors representing more than 4,000 equipment lines. The Review was held September 19-21, and was attended by more than 140,000 visitors.

The OBEP had a display booth along with the Public Utilities Commission of Ohio. The scope and size of the Review made it a good venue for educational outreach, and for raising public awareness of the benefits of biomass and renewable energy use, as well as electric and natural gas choice in Ohio.



*The Biomass Energy Display at the Review*

## Energy Department Announces National Bioenergy Center

Secretary of Energy Bill Richardson today announced the formation of a U.S. Department of Energy National Bioenergy Center to help the U.S. meet its energy needs, manage its environmental challenges and strengthen economic opportunities in rural America. For more information, visit the following site:  
[http://www.eren.doe.gov/bioenergy\\_initiative/page1.html](http://www.eren.doe.gov/bioenergy_initiative/page1.html)



# Landfill • Energy • Golf



An attractive alternative for a closed landfill in Ohio is proving that consumers can protect the environment and enjoy their lifestyles at the same time. Just south of downtown Columbus, built on the former site of the Franklin County landfill, sprawls a brand new golf course called the Phoenix Golf Links. The 18-hole course has a par of 72, and is much more than a pretty replacement for trash.

The Phoenix, developed and operated by Petro Environmental Technologies of Cincinnati, also collects the methane generated by the landfill, and will soon begin on-site production of electricity. Petro is seeking permits from the City of Columbus to construct and operate electricity production units, and hopes to have them running soon.

The generating facility, which will house 3 modular engines producing 1.3 megawatts of electricity each, will eventually serve the golf course itself. The electricity will be sold to the City of Columbus, but Petro will be allowed to repurchase it at an inexpensive cost. As a result, over 60% of the course's electricity need will be met on-site during its operating season.

Public response has been extremely positive for the Phoenix. "People really enjoy the layout of the course. They also like the speed of play that we maintain," said Barry Fischer, the course manager. "Most people really appreciate what was done here- taking an eyesore and turning it into something this nice." According to Petro's Kevin Iler, the developers' business expectations are also being fulfilled.

The development of The Phoenix really is a win-win situation for all parties involved. The Solid Waste Authority of Central Ohio was spending \$100,000 a year on maintaining the landfill, and its protective clay cap was 14-years-old and deteriorating quickly. Now, Petro is paying \$1.8 million to rebuild and improve the cap, and the 185-acre landfill will be leased to them for \$1 a year for 50 years. Petro will also maintain the golf course and methane collection system and build a clubhouse and office complex, all only 4 miles from downtown Columbus.



# Recent Publications

## 1. The Prospect of Energy Crops in Ohio's Competitive Power Market

Ohio has enormous prospects for developing biomass energy resources such as wood and crop residues, landfill gas, biofuels, and energy crops to meet consumer demand for green power and to mitigate greenhouse gas emissions. Opportunities for biomass energy in Ohio have never been greater due to factors such as the changing electric utility industry, increasing energy demands, international global climate change negotiations, advancements in technology, and federal incentives and requirements.

While current market conditions show that most dedicated energy crops are not economically competitive, they do provide significant environmental and social benefits beyond the financial returns. If these benefits are integrated into the market price, biomass power will potentially become a strong competitor in the energy market. International concern about global climate change may enhance the attractiveness of biomass energy. This paper suggests that adoption of additional policies for renewable and sustainable energy should be considered for the establishment of dedicated energy crops in Ohio.



*Energy Crop: Hybrid Poplar*

## 2. Turning Manure Into Gold: Converting Agricultural Waste to Energy

This handbook is built around a checklist to help farmers determine whether using manure to produce energy makes sense for their own operations. The handbook describes the various types of manure and the volume necessary to make a project viable. The handbook also looks at various end-use applications for the energy; space heat, steam and electricity separately or in combination are all possibilities. It discusses the conversion options, such as combustion, gasification and anaerobic digestion. Equipment options, permitting requirements and maintenance issues are also included. This handbook provides practical reference information to the farming community on available technologies and resources for farm animal manure-to-energy projects.



*The University of Findlay  
South Campus Heating Project*

**NOTE:** To receive these reports (free), please contact us.

# Ongoing Electric Restructuring Activities

Electric choice is coming to Ohio on January 1, 2001 whereby for the first time, most electric consumers will be able to choose the company that supplies their electricity. For more information, please visit the PUCO website: <http://www.OhioElectricChoice.com/>

The OBEP is participating in various activities related to implementing the state's electric restructuring legislation, including the development of interconnection tariffs for distributed generation and net metering customers (including self-generators, small electric generation facilities or distributed generation facilities) and in creating public awareness for green power options.

The PUCO recently hosted a series of workshops to reach agreement over the technical, safety and procedural requirements related to connection of distributed generation facilities to the electric distribution company systems. The goal of the workshops is to develop standard interconnection requirements without imposing technical and economic barriers to distributed generation. The participants of the workshop include representatives of Ohio investor-owned utilities, consumer and environmental groups, alternative power suppliers and representatives of distributed generation technology companies and renewable energy technologies. A "pro forma" interconnection tariff agreement and draft stipulation are being drafted for Commission review. The final utility tariffs approved by the Commission would go in effect on or after January 1, 2001.

## BioEnergy 2000 Conference

Every two years the U.S. Department of Energy's Regional Biomass Energy Programs convene the leaders in research, business, and policy for bioenergy/ bioproducts to network and map out a strategy for the future. The agenda and the timing of this year's conference was structured to provide input to influential policy-makers as new federal initiatives take shape in the areas of bioenergy and bioproducts.

The Ninth Biennial Bioenergy conference was held during October 15-19, 2000 at the Adam's Mark Hotel in Buffalo, New York. Hosted by the Northeast Regional Biomass Program, the conference focused on increasing the use of biomass materials to produce transportation fuels, heat and power, chemicals and other biobased products, and bringing them into the marketplace. The OBEP staff presented a poster session on "The Prospect of Energy Crops in Ohio's Restructured Power Market." For more information, visit: <http://www.nrbp.org/bio2000.htm>

Ohio companies represented at the conference included **Renewable Lubricants of Hartville, Ohio** and **External Power of Athens, Ohio**. Renewable Lubricants offers an impressive array of bio-based, high performance lubricants made from high oleic oils from crops like corn and soybeans. Biobased products commercially available from the company include hydraulic fluids, gear and drive oils, machining oils, vacuum pump oils, drip oils, rock drill oils, greases, penetrants, chain and cable lubricants, fuel conditioners, and high performance racing oils.



For more information, the e-mail address is [jgarmier@renewablelube.com](mailto:jgarmier@renewablelube.com) or [wgarmier@renewablelube.com](mailto:wgarmier@renewablelube.com); tel. 330-877-9982.

With operations in Athens, OH, External Power is developing small, modular biopower systems for residential and small commercial markets worldwide.

# Bioenergy Program Receives \$300 Million Boost

WASHINGTON, October 31, 2000 - A new program that seeks to increase the production of environmentally-friendly fuels made from corn, soybeans and other agricultural crops has received \$300 million in backing from the US Department of Agriculture. The program aims to expand markets for agricultural commodities and promote use of bio-fuels like ethanol and soy-based biodiesel. "This program will help us tap into a huge domestic energy reserve - our family farms," said Agriculture Secretary Dan Glickman in making the program announcement. "Encouraging the use of bioenergy benefits America's farmers, while improving our energy security and helping to protect the environment."

According to Secretary Glickman, USDA will make cash payments to bioenergy companies that increase their purchases of corn, soybeans and other commodities to expand production of ethanol, biodiesel or other biofuels. The program will provide higher payments to small and new-to-market processors, including cooperatives, to

encourage the expansion of domestic bioenergy production capacity. USDA will provide up to \$150 million for the program this fiscal year and another \$150 million in fiscal 2002. Sign-up for the program will begin in December.

Glickman also announced that USDA is soliciting proposals for pilot projects that use harvested vegetation to produce energy. The land must be enrolled in USDA's Conservation Reserve Program and the vegetative cover, such as grass, must be an approved cover for use in the conservation program. Pilot projects will be for a minimum period of 10 years and the total acreage per project may not exceed 50,000 acres. The maximum acreage for all pilot projects will not exceed 250,000 acres. No more than one project will be approved in any state. For more information, visit:

[http://www.gnet.org/Coldfusion/News\\_Page2.cfm?NewsID=13088](http://www.gnet.org/Coldfusion/News_Page2.cfm?NewsID=13088)

## Please Visit Our Website

<http://www.puc.state.oh.us/OHIOUTIL/BioMass/biomass.html>

The Ohio Biomass Energy program maintains a Website with a wealth of program and state biomass resource information. The site features the latest in biomass energy projects and applications in Ohio, in addition to information about the program, funding opportunities, Ohio's electric restructuring law, and links to other related sites.

**Ohio Biomass Energy Program  
Public Utilities Commission of Ohio  
180 East Broad Street  
Columbus, Ohio 43215**

**[Bibhakar.Shakya@puc.state.oh.us](mailto:Bibhakar.Shakya@puc.state.oh.us) or [Anne.Goodge@puc.state.oh.us](mailto:Anne.Goodge@puc.state.oh.us)**

**Phone: (614) 466-2871**

180 East Broad Street, Columbus, OH 43215-3793  
The Public Utilities Commission of Ohio  
Ohio Business Energy Program

