

**NRBP Monthly Report**  
**February 8, 2002**

**Energy company to outline plans for New York Ethanol Plant**

Mustang Energy and Riverview Business Park announced plans to turn the former Miller Brewery in Volney, New York into a 30 million gallon Ethanol Plant according to a press release from the company. The owner's plan calls for 30 million gallons of ethanol for now, 100 million later, and the potential of a \$45 million impact on the local economy in the first year of operation.

According to Jim Czub, Mustang President, construction and renovation work would generate 1,000 jobs for about a year. The ethanol operation would produce 40 to 50 permanent jobs at the plant and hundreds of ripple-effect jobs in transportation and other local businesses and industries.

A study by the New York State Energy Research and Development Authority on the commercialization of corn to ethanol found that the Volney site offers "ample warehouse and packaging space, utilities, water treatment and processing equipment, including tanks and compressors ... ample electric power ... (and) readily accessible transportation routes" including a rail spur, Interstate 481 and county Route 57. This will be important according to Mustang, since electricity, gas, corn and transportation charges are so much higher in New York than in the Midwest, where the majority of ethanol plants are located.

**Upcoming Meetings, Workshops, and Conferences**

Massachusetts will hold a working group meeting on March 8, contact Howard Bernstein (howard.bernstein@state.ma.us).

The NRBP will make a presentation to the Delaware Nutrient Management Committee on February 19, 2002, contact Dot Abbott-Donnelly (Dotad@udel.edu).

**Review of NRBP State Activities**

**Connecticut:** *Department of Environmental Protection (DEP)*

Legislation in CT from the 2001 session. Public Act 01-204: An Act Concerning Revisions to the Transfer Act and Other Various Environmental Statutes deals with biomass related issues in Section 7 and Section 8 of the Act, as noted below. Underlining indicates changes made to the statutes. Sec. 7. Subdivision (26) of section 16-1 of the general statutes is repealed and the following is substituted in lieu thereof:

(26) "Class I renewable energy source" means energy derived from solar power, wind power, a fuel cell, methane gas from landfills, or a biomass facility, including, but not limited to, a biomass gasification plant that utilizes land clearing debris, tree stumps or the biomass that regenerates or the use of which will not result in a depletion of resources, provided such facility begins operation on or after July 1, 1998, and such biomass is cultivated and harvested in a sustainable manner.

Sec. 8.Subdivision (24) of section 22a-207 of the general statutes is repealed and the following is substituted in lieu thereof:

(24) “Wood-burning facility” means a facility as defined in section 16-50I whose principal function is energy recovery from wood for commercial purposes. “Wood-burning facility” does not mean a biomass gasification plant that utilizes land clearing debris, tree stumps or other biomass that regenerates for the use of which will not result in a depletion of resources.

The above changes to the CGS are significant, alleviating barriers to permitting biomass gasification utilizing some wood as a source.

The biomass working group kick-off meeting was held on 12/12/01, approximately 20 attended the meeting. The meeting was very successful and the participants are eager to continue to move ahead. Agenda items included: Connecticut DEP and the Biomass Working Group, What is the Northeast Regional Biomass Project, What’s happening in the region, Biomass in Connecticut - Past, Present & Future, Discussion of Working Group Goals and Objectives (What issues should be addressed? What should our short and long-term goals be? What role can the working group play?). Follow-up on these ideas will be done via e-mail after the participants have had a chance to review the meeting notes, which are currently being drafted and will be sent out to everyone on the mailing list in early January.

The CT Clean Energy Fund has an application for 80 mega watt facility for Waterbury area. Presently exploring permit requirements, siting issues and sources of the biomass. Could provide power for CT and MA. The CT DPUC had a ruling on this project and it is considered a Class 1 renewable.

**Delaware:** *State Energy Office (SEO)*

The Delaware Bioenergy Consortium sponsored an ‘Ethanol Briefing Breakfast’ on November 30, 2001, at the Dover Modern Maturity Center. Invited guests included members of the Delaware agriculture community and Delaware State Legislature, members of the Delaware Clean State Program Working Group, along with individuals responsible for an ethanol infrastructure in Delaware. Thirty-three individuals participated in the ½day session. Presentations were provided by Bob Dinneen (President-Renewable Fuels Association), Peter Furey (Executive Director-New Jersey Farm Bureau), and Rick Handley (NRBP Director). Due to the current status of the US Farm Bill, Chris Schepis (National Farmers Union) was unable to attend. This breakfast briefing was designed to provide basic information surrounding the manufacturing and use of ethanol as an alternative fuel, along with enlightening interested groups in Delaware of efforts being discussed in neighboring states regarding this issue and to begin discussions within Delaware on ethanol. Interest was generated from this workshop to hold similar events in the immediate future and speakers have been asked to provide their presentation in smaller, ‘specialized’ group settings. A regional approach to providing feedstock and siting ethanol production facilities was the ‘key’ emphasize during the open discussion session. Delaware farmers are looking for other diverse avenues to continue their agriculture ventures and supplying a feedstock of annual grains and other biomass products would serve an economic benefit.

The University of Delaware Cooperative Extension continues Spring 2002 planning

implementation of one 3+-acre biofuel plantation on the Georgetown Research & Education Center's farmland. This first plantation will include hybrid willows in conjunction with research needs from Syracuse University. The DDAFS-Taber Biofuel Research Plantation has been dissolved. The DDAFS-Blackbird Biofuel Research Plantation continues to grow hybrid willows and switchgrass.

The Delaware Bioenergy Consortium informational brochure will be printed within the next few months.

Plans are underway to host an early spring 'Corn-Stove Heating' Workshop in the Dover area. The workshop will provide classroom time for information sharing along with demonstration opportunities for manufacturers. The Delaware Bioenergy Consortium will be asked to help sponsor this 1/2 day event

**Maine:** *State Planning Office (SPO)*

Maine has assembled a very active group of State Commissioners, senior staff, and University researchers to consider the adequacy of the State's R&D infrastructure to attract bio-products production and support industry growth. Accomplishments in the last quarter include:

- Briefings of the Governor, Natural Resources Sub-Cabinet, and senior staff on bio-products opportunities and development of consensus among relevant Cabinet members and senior staff on appropriate next steps.
- Development and circulation of a concept proposal for expanding bio-products RD&D in Maine.
- University evaluation of inter-disciplinary RD&D opportunities related to bio-products.
- Commitment from the Commissioners of Conservation, Environmental Protection, and Economic & Community Development, the Director of the State Planning Office, the VP of Research at the University of Maine, and others to meet in January 2002 to discuss common interests related to bio-products and potential joint strategies for pursuing them.
- Assistance provided to Congressional staff interested in what bio-products production and use could mean for the State economy.
- Misc. assistance provided to potential manufacturers and purchasers of bio-products.

**Other:**

- Assistance provided to a local economic developer interested in encouraging bio-diesel production.
- Continued work with the State Department of Environmental Protection on how bio-fuels or fuel additives could contribute to the State's air quality objectives.
- Information dissemination on feasibility studies regarding the potential for ethanol production in Northern Maine.
- Initiated discussions within the Administration and the region on the role bio-products and bio-energy could play in achieving the objectives contained in the region's joint Climate Action Plan.

**Maryland:** *Maryland Energy Administration (MEA)*

Work has started at the Wye Island Research and Education Center on the installation of a basic combustion system for use with switchgrass. MEA plans to heat a barn or some other type of building. There is substantial interest concerning the extent to which switchgrass can replace a non-renewable fuel. Currently, they are working to fabricate an automatic delivery system for the switchgrass. A fluidized bed system is finished and has been tested using natural gas. MEA is now getting ready to do a test burn with poultry manure. MEA has encouraged the developer to attempt to obtain patents for the unique aspects of the technology. If this could be accomplished there would be a better chance of obtaining the additional money necessary to move the project out of the laboratory and into a full scale demonstration mode. MEA is going to carry out a feasibility study for a potential landfill gas project. The project will be located on the Eastern Shore. There are several possibilities for energy production.

**Massachusetts:** Division of Energy Resources (DOER)The State's biomass working group has swelled to nearly 40 members. Three meetings of the group have been held since its inception. The draft regulation for the Massachusetts Renewable Energy Portfolio Standard (RPS) was issued for public comment. The biomass working group served as a focal point for biomass advocates to provide comments on the draft RPS regulations. The four million dollar Mount Wachusett Community College biomass energy heating plant project is partially funded by a \$1 million appropriation in the U.S. Department of Energy budget and by a \$750,000 grant from the MA Renewable Energy Trust. The project will convert the all-electric heating system to a hot water system with a woodchip gasifier, using sawmill residues from nearby Massachusetts sawmills – residues that currently are trucked to locations 200-300 miles away. The project will be integrated into the college's curriculum and is consistent with the mission and activities of the Forest and Wood Products Institute at the college.

**New Hampshire:** *Governor's Office of Energy and Community Services (ECS)*

The closure of the Pulp and Paper Corporation of America's mills in Berlin and Gorham, and the rate order buyouts or buydowns at three wood-fired power plants have posed a major challenge to a large geographical region of the state; to the forest products industry, the third largest sector of the state's economy; to forest ecology; and to the expansion of renewable biomass energy utilization. Yet this challenge constitutes an outstanding opportunity to enlist a variety of stakeholders and state agencies in the development of integrated solutions having a common basis: forest biomass. Much of this quarter's work consisted of laying groundwork for subsequent action on a series of biomass-related issues, primarily centered on forest-based industries, bio-fueled power generation, co-location of industries, and the North Country economy. No Biomass Advisory Group meetings were scheduled this quarter due to wood-fired power plant rate order petitions pending before the Public Utilities Commission. The petitions have been acted on, and there is now a basis from which to go forward with planning for the main biomass sector in the state. Highlights of program activities for the fourth quarter are as follows:

- Obtained definitive information and data on all biomass-fueled independent power providers (IPPs) in the state; 6 wood-fired plants, 3 Landfill Gas (LFG) and 2 Municipal Solid Waste (MSW), including nameplate generating capacity, updated contact information, rate order starting and expiration dates for wood-fired plants. Calculated percent of state's total

capacity represented by the biomass-fueled plants (4.6%). Calculated the number of NH individuals and households served by biomass-derived power. Made this information available to all ECS staff on LAN; included it in New Hampshire Energy Facts, a document in progress.

- Researched companies and technologies for wood gasification and fast pyrolysis to produce bio-oil; also on development of bio-oil fired combustion turbine technology, with an eye to power generation but also to the possible use of bio-oil as a source of valuable “green” chemicals. Arranged a visit to the McNeil wood gasification project in VT; will also visit the VT Methane Demonstration Project at the same time.
- Monitored grant to Prof. Lee Lynd of Dartmouth College for continued research on the enzymatic conversion of cellulose to ethanol.
- Maintained communication with the Business and Industry Association of New Hampshire group which is planning a fuel cells workshop and passed relevant information to them. Probable date of workshop is pushed into late Spring 2002.
- Produced a master list of 120 cordwood vendors in NH. Selected a geographically diverse list of thirty vendors to survey for price and supply information. Initiated the survey.
- Followed the progress of plans to establish a biodiesel demonstration under ECS’s Alternative Fuel Vehicle Project.

**New Jersey:** *Department of Environmental Protection, Forest Service (DEP)*

A Carbon Sequestration Demonstration Project is being developed at the NJ Forest Service Environmental Education Center in Jackson, NJ. The project will determine Carbon Sequestration on a range of forest cover types, soil series and forest management treatments involving growth rates, stocking levels and site indexes. Forest resource contributions to carbon sequestration and CO<sub>2</sub> mitigation is a component of New Jersey's Greenhouse Gas Action Plan. The advantages of biomass energy is also incorporated into that action plan. The Carbon Sequestration Demonstration Project is intended to provide data specific to Central New Jersey forest cover types and management prescriptions. Results will show information that may help promote carbon credits regarding forest resources as well as helping to develop biomass energy applications in the state.

The second meeting of the Biomass Technical Working Group was held in conjunction with the New Jersey Customer Sited Clean Energy meeting on December 5, 2001. New rebate calculations were reviewed for class one renewables involving a three-tier system for small scale (< 2mw) applications with a maximum buydown/system cost capped at 60%. In 2001, 24 renewable energy project applications were generated statewide involving PV (21), wind (2) and biomass (1) systems.

New Jersey's Biomass Technical Working Group functions to guide the biomass component of the NJ Electric Discount and Energy Competition Act in developing Interim Portfolio Standards for its renewable category as well as reviewing applications for Societal Benefit Charge funding

regarding compliance standards. The group's objective is to assure Class I renewable energy production applications involving biomass feedstock meet guidelines defined through this legislation.

One biomass energy application is presently moving to its final state of review for funding. This wood gasification project utilizes 5,600 tons of wood residues per year in the production of process steam for drying lumber and generating electricity.

**New York:** *New York State Energy Research & Development Authority (NYSERDA)*

NYSERDA is tracking testing of biodiesel as a home heating fuel. Abbott & Mills will be testing a biodiesel blend with home heating fuel in about a hundred homes during the current heating season. They are buying a soy-based biodiesel and blending it in their delivery trucks at 20% by volume. The blend will be delivered into the tanks, some of which are outside both underground and above ground, at the chosen residences according to the schedule normally used for fuel oil. No special additives (apart from what is used with the fuel oil) are used and no changes have been made to the rest of the equipment at the residences. Brookhaven National Laboratory (BNL) has obtained bottom samples from some of the tanks in the testing. BNL is also setting up a boiler for testing with the blend stored and supplied from a scat tank outside. Abbott & Mills has delivered over 15,000 gallons of the blend so far. There have been no unusual service calls related to the storage and use of the blend so far despite a couple of days when the temperature dipped to 10<sup>0</sup> F.

**Rhode Island:** *Department of Administration, State Energy Office (RISEO)*

The NRBP's biomass program is working with the Warwick School District on a demonstration of biodiesel in the school's boilers. NRBP funding for the project has been leveraged with funds from the National Renewable Energy Laboratory (NREL). Early results for the project show reduced air emissions including NOX and little or no technical problems using 5, 10, or 20 % blends of biodiesel with heating oil. Following a very successful energy rebate program in the State RISEO is considering a clean wood burning appliance initiative to promote pellet stoves and clean stoves, especially to displace electric and oil-heat. RISEO is considering a rebate to consumers who trade-in older non EPA approved wood stoves for newer cleaner more efficient models. RISEO continues to work on establishing a Biomass Working Group in the state.

**Vermont:** *Department of Public Service (DPS)*

State program staff are still hopeful of holding a Steering Committee meeting in Vermont in the spring of 2002. In addition to normal business, it is hoped to provide training and tours focused on available and practical, direct combustion technologies for wood fuels. Possibilities for tours include the McNeil Station and VT Gasifier, school and industrial woodchip heating systems, small scale co-generation installations and perhaps even a tour of Catamount Pellet's new facility.

If the meeting is to happen, planning should start soon. Program staff continue to provide information on all types of wood energy applications as requested. During the last quarter staff responded to a total of eighty-five requests for wood energy publications. Residential wood energy publications accounted for seventy-two of the items requested. The VT Public Service Department wood burning fact sheets continue to be very popular. Should additional DOE funding become available, updating and reprinting a residential wood heat publication should be strongly considered.

The Office of Building Technology, State & Community Programs completed its calendar project and they received a supply in early January. The Barre Town and Hazen Union Schools are featured on the month of December, highlighting their wood chip heating systems. The contractors made only one small mistake and included the photo of the Barre Town boiler with the Hazen photos. In general, it is a very nice product and some well deserved recognition of Vermont's efforts in school wood chip heating.

The Annual School Woodchip Users Conference was held on October 30<sup>th</sup> in Colchester, VT. The original plan was to tour the woodchip heating system at the VT National Guard Base at Camp Johnson. However, security concerns in the wake of the events of September 11<sup>th</sup> made the tour impossible. Roughly twenty-five woodchip users, suppliers, and equipment manufacturers attended the meeting. Chiptech vice-president Brad Noviski gave a short presentation on the Camp Johnson heating system, and Paul Frederick gave a short Powerpoint presentation on woodchip supply. This was followed by general discussion relating to issues of concern to the users present.

The annual survey of schools found ...

1. 23 Public & private schools heated with woodchips during the 2000-2001 school year, and 3 additional schools will come on-line during the winter of 2001-2002.
2. The average price paid by schools for chips was \$28.80 per green ton, with a range of \$23.00 to \$35.00 per green ton.
3. Overall, wood chip heated schools saved Vermont taxpayers an estimated \$220,000 during the 2000-2001 heating season when compared with fuel oil.

The Montpelier District Energy partners seem willing to make a commitment of funds for the project. The City of Montpelier has included a line item in its annual budget, and while budget constraints are affecting the State Buildings Division, the Legislature may be able to make some funding available. Staff continues to work with a hospital in northern Vermont on a biomass combined heat and power project.

The Methane Project Steering Committee met on October 19, 2001. The meeting included presentations by Scudder Parker, VT DPS, regarding the Governor's energy initiative, and Dan Scruttin, VT Dept of Ag, on the project's phase one accomplishments. Also discussed were strategies for proceeding with phase two of the project. An article in a recent newsletter from the Vermont Electric Cooperative showed some promise for new methane co-gen systems. The Co-Op is apparently looking for a candidate for a system to add to its distributed generation portfolio in its northern Vermont service territory.

The School Energy Management Program, BEREC staff and FP&R staff all received calls from concerned wood chip users earlier this fall concerning the availability of chips and new sources of supply. It seems a couple of the established and reliable suppliers had informed their customers that they should begin trying to find new sources of fuel. In one case the sawmill was experiencing difficulty in obtaining logs and was scaling back operations, and in another the chips were being diverted to fuel boilers at another company-owned facility. After meeting with several

suppliers, it became clear that due to the need for specialized delivery equipment and/or chip storage, potential suppliers are a limited resource. On the one hand more suppliers are needed, but on the other it is clear that the current demand cannot support too many. One or two new suppliers, close to the markets could easily eliminate any real or perceived shortage. Efforts are ongoing to encourage mills and brokers to investigate the school market as a potentially profitable new business.

Catamount Pellet has moved into its new facility in Claremont, NH. Equipment is currently being installed and the owners hope to have the plant on-line by about the first of February. The company plans to hold an open house in June.