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Vermont Renewable Energy and Efficiency Monthly (VREEM) -- August 1, 2003

VREEM is a monthly electronic newsletter published by Renewable Energy Vermont.
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News
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1. Catamount Energy Drops Out of Equinox Wind Project

Manchester - A proposed wind energy project for Little Equinox Mountain will go forward even though Catamount Energy Corporation has dropped out, the development's other backer said.

Catamount executives said the company decided to get out of the Equinox project because it was taking longer than expected and other larger projects provided better opportunities for the company. Robert J. Charlebois, Catamount Energy's managing director, called the company's spending on the project a "bona fide effort."

"I think everyone understands that we gave it a college try, as they say," he said. "We have spent a considerable amount of time and resources on Equinox."

Endless Energy Corp. of Yarmouth, Maine, will continue with the project as planned, said Harley Lee, the company's president. Catamount Energy, a subsidiary of Central Vermont Public Service Corp., had spent more than $100,000 on the project, Lee said, adding that the exact amount is proprietary information.

The partnership went by the name Equinox Wind Partners and was the two companies' only partnership for a wind project. Endless Energy has the ability to pay for the entire project, even though Catamount is not involved, Lee said. "One way or another we're going to get the money for the rest of the development," he said.

When the project is ready to be built, Endless Energy will join with investors to pay for the $12 million project, Lee said. "We have many, many potential investors," Lee said. "That's actually the least of our problems."

The $12 million project involves the construction of five 330-foot-tall wind turbines that could produce enough electricity to supply up to 4,000 homes.

(This article first appeared in the Burlington Free Press as reported by

the Associated Press.)

For more information:
www.endlessenergy.com

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2. Burlington Electric Department Announces Solar on Schools Program

Solar on Schools, a new collaborative effort between Burlington Electric Department (BED) and the Burlington School District, will place photovoltaic panels on the roofs of Burlington's public schools beginning this September.

The program, which will get underway at Champlain Elementary School on Pine Street, will install one-kilowatt photovoltaic systems on the roofs of each public school over the next four years. Each system will include educational displays located inside the schools and formal curriculum training for teachers. Along with increasing the amount of non-polluting renewable energy in Burlington, the project will teach students will learn about this important source of energy for the future.

The program will be funded primarily through voluntary contributions from BED customers who will be able to add a small amount to their monthly electric bill. The Burlington Solar on Schools program received a $10,000 grant from the U.S. Department of Energy through the Vermont State Energy Office. In addition to support from residential customers, BED is also seeking business sponsors for the program.

For more information on the program or to sign up:
Contact Mary Sullivan at 865-7417 or visit the BED website at www.burlingtonelectric.com.

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3. Efficiency Vermont Releases Preliminary 2002 Annual Report

Burlington - Efficiency Vermont, the nation's first energy efficiency utility, has released its Preliminary 2002 Annual Report, "The Power of Efficient Ideas." The report highlights the utility's accomplishments in 2002, including:

* Reducing Vermont's annual energy use by nearly 40 million kilowatt hours.

* Helping more than 32,000 homes and businesses reduce their energy costs.

* Eliminating 427,000 tons of greenhouse gas emissions that would have been generated from conventional energy sources.

Established by the Vermont Public Service Board in 1999, Efficiency Vermont serves Vermont residential and business electricity consumers with efficiency audits, financial incentives, and rebates on energy-efficient products. Efficiency Vermont's efforts were recognized in May when it received an Innovations in American Government Award from Harvard University's Kennedy School of Government.

The Preliminary 2002 Annual Report is subject to verification by the Vermont Public Service Board and the Vermont Department of Public Service. The final Annual Report for 2002 will be available in September 2003.

For more information or to view the entire report:
www.efficiencyvermont.com

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4. Lowell Wind Energy Proposal Stirs Debate

Lowell - A proposed wind energy project here in the Northeast Kingdom is the source of a growing debate over land-use, aesthetics, and the energy future of Vermont.

EnXco, a California-based wind energy developer with projects around the globe, is proposing locating several wind turbines atop the ridgelines around Lowell Mountain. The precise number of turbines is still in the planning stages, though John Zimmerman of Vermont Environmental Research Associates (VERA) -- serving as a consultant for enXco -- says that there must be at least 10 or 15 turbines to make the project economically viable.

Most concerns about the project focus on its visibility. Don Nelson, a farmer with 620 acres at the base of Lowell Mountain, would have a clear view of the installation. “We're talking about a state that fights to keep billboards off the interstate allowing 30 huge towers to be built on an undeveloped mountain range. That's bad," Nelson told the Burlington Free Press.

Zimmerman concedes that the turbines, which are 300 feet from base to blade tip, would dominate the skyline. “Any place we are looking to be in, you can see from a long way away,” he said

Ben "Trip" Wileman, who has sold easement rights for his property to enXco, has a different view. The project, Wileman said, is environmentally friendly, will eventually lower local utility rates and create jobs. "It's also good," Wileman said, "that it can bring these benefits with very little negative impact, once you get past the subjective opinion of whether wind towers are visually appealing or not."

Richard Pion, chairman of the Lowell Selectboard, said he thinks only a handful of residents are opposed to the project.

"I'm in favor of renewable energy," said Pion, who owns about a half-mile of the Lowell ridge. "Fuel prices are rising and maybe it's time to do some of these projects."

(Portions of this article appeared in the Burlington Free Press and the Caledonian-Record Online Edition.)

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5. Renewable Energy Vermont Elects New Officers

Buel’s Gore - In this unincorporated sliver of Vermont, Renewable Energy Vermont (REV) elected a new slate of officers during its annual meeting on July 17. REV, a four-year-old trade association made up of renewable energy businesses and interested individuals, is dedicated to increasing the amount of renewable energy used in the state.

The new slate of officers represents a move in a new direction for the organization, said Andrew Perchlik, REV’s Executive Director. “REV will continue to work through legislation, education, and outreach but with new energy and new focus,” he said. “This election represents a significant step for REV by adding new blood to the organization.”

Chairing the board is Lawrence Mott of Northern Power Systems. Vice Chair is David Hill of Vermont Energy Investment Corporation. Sam Swanson of the Pace Law School Energy Project is the new Secretary and Mathew Rubin of East Haven Wind Farm is Treasurer.

For more information:
www.REVermont.org

Features

Ask the Energy Expert: Jeff Hollar, Water Energy Distributors, Inc.

Question: Can you explain how geothermal energy systems work and how I might use one in my Vermont home?

Jeff Hollar answers:

Simply put, a geothermal system uses naturally stored energy in the earth to heat your home. Below the frost line in the earth, the temperature remains fairly constant at 50 to 60 degrees F year-round. By absorbing this amount of heat with an energy carrier (e.g., water or refrigerant) and distributing it throughout a dwelling, a homeowner can help warm or cool inside temperatures, depending on the season.

Geothermal systems are typically configured in one of three ways:

*A closed system features pipes running vertically or horizontally underground. The pipes are generally filled with refrigerant and absorb or expel heat from the house to the surrounding earth.

*A standing column well has a six-inch diameter bore hole in the earth up to 1500 feet in depth. Water is pumped from the bottom of the well, routed through a dwelling, and is then returned to the top of the well.

*An open system transfers water pumped from one well (or body of water) to another at a different temperature.

Closed systems are the most energy efficient, followed by standing column systems and, finally, open systems. However, the system best suited to your home depends on the geological resources at hand.

A typical price range to purchase and install a geothermal system is $2,800 to $4,000 per ton of system. This range varies because of the several construction cost variables. For example, wells, duct work, plumbing and electricity charges vary from system to system and homeowner's requirements. A well-constructed 2,000 square foot home may require a 4-ton system.

In terms of savings, you can expect a geothermal system to pay for itself in two to five years - while yielding a savings of 40% to 50% over heating (or cooling) using gas or oil.

Jeff Hollar is an engineer with Water Energy Distributors, Inc. For more information, contact him at (603) 362-4666, or visit the company's website at www.northeastgeo.com.

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Company in the Sun: Draker Solar Design, LLC

Draker Solar Design, LLC, is an engineering firm specializing in renewable energy data acquisition (DAQ) and displays. Services include hardware and software selection and installation, data management, data analysis and renewable energy component testing. The company, located in Burlington, was started in 1999 by AJ and Kathy Rossman and is growing this year with

the addition of a network engineer, another electrical engineer and a Web page programmer.

Draker Solar offers a wide range of DAQ services including DAQ system design and installation (including kiosks); DAQ consulting and training; custom displays and off-site data hosting with Internet display.

Draker Solar is set to introduce a web-based data management service at SolFest in Hopland, CA on August 21, 2003. This system will allow owners, installers and other interested parties to see how their renewable energy systems are performing from any web browser connected to the Internet. Draker Solar has also developed several specialty products including a Backcountry Battery Pack (ultra-portable power pack) and solar-powered aeration systems for wastewater treatment systems in Mexico.

Company President AJ Rossman holds a Masters Degree in Electrical Engineering. Rossman is particularly interested in the educational component of data acquisition. He has taught a Renewable Energy Engineering course at UVM for the past two years entitled Renewable Energy: Principles and Design. He also teaches workshops on datalogging renewable energy systems at the Midwest Renewable Energy Fair in Custer, WI and Solar Energy International in Carbondale, CO.

Rossman is also the data acquisition specialist for Home Power Magazine (www.homepower.com), a hands-on journal for renewable energy. His duties at Home Power include testing and reviewing renewable energy equipment.

For more information:
Contact AJ Rossman at aj@drakersolar.com or (802) 238-8648.

Events

Saturday, August 2, Warren
House tour: Innovative Homes of the Mad River Valley. Join Yestermorrow Design/Build School for a rare opportunity to experience innovative architecture first-hand, as we visit a broad sampling of homes designed and built by the area's extraordinary community of architects and design/builders. Learn about the design process directly from the architects and homeowners themselves, and expand your sense of what is possible in residential architecture, both inside and out. Innovations range from the whimsical to the practical, from off-the-cuff improvisation to the meticulously planned, state-of-the-art systems that increase energy efficiency. A $30 admission fee supports Yestermorrow's ongoing programs and includes chartered bus transportation during the day. Space is limited. Contact: (802)496-5545

Wednesday, August 6, Burlington
Renewable Energy Workshop, Vermont Natural Resources Council.
If you want to find out more about renewable energy systems, join VNRC and Global Resource Options for a presentation on how you can bring renewable power into your home, how much it will cost, how you can tap into incentives and more. Contact: mburani@vnrc.org

Wednesday, October 8, Burlington
Renewable Energy Vermont's 2nd Annual Power for a New Economy Conference. This will be a full-day event designed to meet the growing demand for renewable energy information and spur development of renewables in Vermont. The event is intended for the interested public, the renewable energy industry, state government, and other interested organizations. The event

will feature keynote presentations, display tables, networking opportunities, and workshops. Contact: www.REVermont.org.

About VREEM

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