

VREEM is a monthly electronic newsletter published by Renewable Energy Vermont.

=====

In this issue:

*News

1. Green Mountain Power Continues Plans for Searsburg Project Expansion
2. Public Hearing Scheduled for East Haven Demonstration Project
3. New State Energy Plan Faces Criticism From Environmental Groups
4. Public Service Board Opposes Budget Cut for Efficiency Vermont
5. Biofuels Association Launched in Middlebury
6. Biodiesel Fuel Debuts in New Hampshire
7. Yestermorrow Creates Vermont Scholarship Fund

*Features

Ask the Energy Expert: Hydrogen fuel cells as renewable energy
Company in the Sun: NativeEnergy, LLC

*Events

=====

News

1. Green Mountain Power Continues Plans for Searsburg Project Expansion

Searsburg - The Green Mountain Power Company is continuing with its plans to triple the number of electricity generating wind turbines on Mount Waldo and extend the system into neighboring Readsboro.

The 22 new wind towers would each be 215 feet tall, compared with the existing 11 towers which are 132 feet tall, and the blades would have a spread of 230 feet, compared with 130 feet on the existing windmills, Waterbury consultant John Zimmerman said.

The new wind turbines would generate six times the amount of power produced by the existing towers, said Dorothy Schnure, a spokeswoman for Green Mountain Power.

"Wind has become much more efficient since we built that in 1997," Schnure said. "The trend is toward much larger turbines."

The existing towers, clearly visible on Mount Waldo just east of Route 8, have a 6-megawatt capacity, enough to power 2,000 homes, Schnure said. The new towers would add 33 megawatts, enough electricity to power 12,000 additional homes, she said.

Gerald Lind, chairman of the Searsburg Select Board, said it was too early to comment on the impact of the project. "It's still in the early stages. It would be unfair to make a judgment on the effects of it," Lind said. But he acknowledged that the tax money paid to Searsburg by the power company has been welcome.

One full-time technician maintains the existing windmills, and it is likely that the expansion would create an additional full-time job, Schnure said.

(This article was excerpted from the December 10, 2003 issue of the

For more information:
www.gmpvt.com

2. Public Hearing Scheduled for East Haven Demonstration Project

Montpelier - The Vermont Public Service Board has scheduled a public hearing as part of its consideration of the proposed four-turbine East Haven Demonstration Project. The hearing, scheduled for Tuesday, January 13 at 7 p.m. at the East Haven Community Building, is part of the East Haven Windfarm's application for a Certificate of Public Good under section 248. The hearing is open to the public.

East Haven Windfarm's vice president, Dave Rapaport, was pleased with how quickly the hearing was scheduled. "Based on the schedule, we may be able to receive our Certificate of Public Good by this spring, leaving open the possibility of completing construction in the fall of 2004," he said.

If built, the proposed project will provide approximately 30% of the electricity used by customers in the Lyndonville Electric Department service territory at below market rates, according to Rapaport. "In addition to the environmental and security benefits of clean renewable energy, the project will bring important local economic benefits including cheaper electricity, tax revenues and jobs," Rapaport said.

For more information:
www.easthavenwindfarm.com
www.state.vt.us/psb

3. New State Energy Plan Faces Criticism From Environmental Groups

Montpelier - The Vermont Department of Public Service's 20-year energy plan for Vermont unveiled in early December has attracted the criticism of state environmental groups. The groups charge that the Douglas administration's plan fails to address the most significant sources of greenhouse gas emissions, will increase rates for small businesses and residential customers, and may actually encourage increased energy consumption.

"It looks like Governor Douglas has taken a page from Dick Cheney's playbook," said Drew Hudson, field coordinator for the Vermont Public Research Group. "A final draft was written without a single hearing or opportunity for input and released during the busy holiday season when Vermonters focus their attention elsewhere."

Critics said the plan also lacks adequate support for energy efficiency. "The least expensive energy, by far, is energy that is never used in the first place. Increased support for Vermont's energy efficiency programs not only reduces rates for all customers, but diminishes our reliance on more expensive out-of-state sources of electricity," Patrick Berry of the Vermont Natural Resources Council.

Berry also expressed concern that the plan continues to undercut investment in clean, renewable energy. "Vermont has fallen behind the rest of New England in planning for more reliable, less expensive, and more environmentally friendly sources of renewable energy. It doesn't make sense."

According to the Brattleboro Reformer, Public Service Commissioner David

O'Brien defended the plan as a stepping stone from which the state's "energy portfolio" - the in-state generating facilities such as dams and other power generators as well as energy imported from other regions - will proceed.

"It's the first energy plan we've had since 1994," he said, "but we don't want to lay out a schedule that says we'll do A, B, C and then D. It's a framework to base sound decisions on."

For more information:
www.vpirg.org
www.state.vt.us/psd

(Editor's note: A schedule of public hearings regarding the State's energy plan is provided below in the "Events" section.)

4. Public Service Board Opposes Budget Cut for Efficiency Vermont

Montpelier - The Public Service Board has rejected most of an effort by the Douglas administration to reduce the budget of Vermont's statewide energy efficiency utility.

The result will be a budget of about \$16.2 million for Efficiency Vermont in 2004, raised through a charge on electric bills ranging from about a tenth of a cent per kWh for industrial customers to a little more than three-tenths of a cent per kWh for residential ratepayers.

The Department of Public Service (DPS), which is responsible for representing ratepayers before the board and answers to the governor, had pushed for a cut in the projected 2004 budget for Efficiency Vermont of about \$600,000. Instead, the board trimmed the budget by about \$96,000.

The DPS defended its proposal as true to the founding of the mission of the energy program.

Critics of the DPS's approach, including former Public Service Board Chairman Richard Cowart, said they thought the department was stretching the interpretation of the founding agreement. "Energy efficiency is Vermont's cheapest source of electrical energy," said Cowart.

(This article was excerpted from the November 29, 2003 issue of the Burlington Free Press as reported by David Gram of the Associated Press)

5. Biofuels Association Launched in Middlebury

Middlebury - The Vermont BioFuels Association (VBA), a new organization established to promote the use of biodiesel and other agriculturally derived fuels, was formally organized at a group meeting on November 20 in Middlebury.

The meeting was the third monthly gathering of an ad hoc group of biofuels advocates that has included local legislative representatives, farmers, engineers, biodiesel users and producers, entrepreneurs, Middlebury College faculty, staff and students, and interested community members.

"We feel that the Vermont BioFuels Association has a lot of potential to raise the awareness of the general public about biodiesel and to help coordinate the activities of various elements of the industry that, up to now, have been operating without much coordination," said Greg Pahl, a co-facilitator of the meeting.

Also attending the Thursday evening gathering were representatives of the Williston-based Biorenewables Education Center (BEC), whose goals are similar to those of the VBA. "It's clear that our two groups have a lot of interests in common, and we look forward to collaborating with the Vermont BioFuels Association on a wide range of activities in the future," said Sabrina Trupia, a BEC board member.

The next meeting of the VBA will be at 7 p.m. on Thursday, January 22 in the upper meeting room at St. Stephen's in Middlebury.

For more information:

Contact Netaka White at 352-9817 or Greg Pahl at 388-0134.

6. Biodiesel Fuel Debuts in New Hampshire

West Chesterfield, NH - A Vermont company is providing biodiesel to New Hampshire's first gas station to offer the fuel. Global E Industries Ltd., based in Cavendish, is supplying biodiesel to Fleming Oil's Shell station on Route 9, which has become the first filling station in the state - and one of the few in New England - to offer a biodiesel fuel mixture at its pumps.

One of Fleming's diesel pumps is now carrying a 20% biodiesel fuel mixture and the company had already sold approximately 3,500 gallons as of early December.

"It's fantastic to see Fleming Oil carrying biodiesel fuel, and their initiative goes a long way to introducing it to the mainstream," said Dave Bonta, owner of Global E. "They are the first place in the area to carry it, but hopefully more will follow in the spring."

The station offers the most commonly used blend of biodiesel fuel - B20 - which can be used without any alteration to the mechanical systems in any diesel vehicle.

"Our type of business, for many years, has had a black eye when it comes to the environment," said Rick Fleming, the president and one of the owners of Fleming Oil. "This is a step toward changing that."

The cost is \$1.98 per gallon, approximately \$0.40 more than normal diesel fuel, but experts say the myriad environmental and economic benefits outweigh the jump in price.

The fuel comes from a variety of renewable sources, such as soybean oil and recycled waste oils. A vehicle running on 100% biodiesel fuel would release fewer emissions that are toxic to animals and humans.

For more information:

www.globaleindustries.com

(This article was excerpted from the December 4, 2003, issue of the Brattleboro Reformer as reported by Daniel Barlow.)

7. Yestermorrow Creates Vermont Scholarship Fund

Warren - Yestermorrow Design/Build School and the nonprofit Vermont Energy Investment Corporation (VEIC) have created a scholarship for Vermont residents.

VEIC designated a fund for students interested in attending any of the three

upcoming Yestermorrow courses: The Whole Systems House: Future Design (January 18 - 23), Designing Solar Energy Systems (February 7 - 8), and Designing High Performance Commercial Buildings (March 27).

Full and partial scholarships are available. Application deadlines are two weeks before the beginning of each course.

Scholarship applications are available by calling Yestermorrow at 496-5545.

For more information:
www.yestermorrow.org

Features

Ask the Energy Expert: Chris McKay, Northern Power Systems

Question: Are hydrogen fuel cells considered a renewable energy source? When will I be able to buy one for my car or home?

Chris McKay answers: Hydrogen fuel cells are not inherently a renewable energy source. Hydrogen fuel is best described as an energy carrier. Although hydrogen is the most abundant element on earth, pure hydrogen (H₂ gas) rarely occurs naturally. Instead it must be isolated from other substances that contain hydrogen, like water (H₂O) or natural gas (CH₄). The source of energy used to produce the hydrogen determines whether or not any given hydrogen fuel cell is considered renewable. One of the reasons that there is broad support for hydrogen fuel cell vehicles is that the potential sources of energy to produce the hydrogen fuel is as diverse as the entire energy industry. Coal, oil, natural gas, nuclear, wind, hydro, geothermal, solar, and biomass energy may all be used to produce hydrogen fuel, which may then be used in a fuel cell to produce electricity.

Hydrogen fuel cells are an exciting option for power generation or vehicle power because they are potentially more efficient than internal combustion engines and they are extremely clean - the only byproduct is water.

When you will be able to purchase a fuel cell for your car or home depends on how much more you are willing to pay. Today there are dozens of prototype fuel cell cars and buses in demonstration programs, but the auto industry estimates that it will be at least another 15 - 20 years before fuel cell cars and the fueling infrastructure required to support them will be commercially available at a competitive cost. Today's fuel cell vehicles are 25 - 50 times more expensive than a comparable gasoline vehicle.

Stationary fuel cells for industrial applications using natural gas as the hydrogen source are already available, and hundreds have been installed around the world. However, these systems cost 5 - 10 times more than the traditional solutions, and they are much larger than a home requires. Companies like Plug Power and United Technologies are developing smaller residential systems that should be available within a few years, but initially this option will cost far more than utility power or more traditional back-up generators. Perhaps in the next 5 - 10 years stationary fuel cells will become cost competitive with the alternatives. In the meantime, fuel cells and hydrogen can help provide a vision of a future with clean, secure energy.

Chris McKay

Chris is an engineer at Northern Power Systems in Waitsfield, Vermont. Northern designs, builds and installs ultra-reliable electric power systems

for industrial, commercial and government customers worldwide. Visit www.northernpower.com for more information. Chris may be contacted at cmckay@northernpower.com.

For more information about fuel cells:
www.fuelcells.org or
www.eere.energy.gov.

Company in the Sun: NativeEnergy

Established in the summer of 2000, NativeEnergy provides simple and effective services that allow individuals and organizations to fight global warming by supporting the development of new renewable energy facilities. This is achieved through the sale of tradable renewable energy credits - also known as "green tags" - that allow individuals, businesses and organizations to financially support the production of renewable energy while offsetting their emissions.

NativeEnergy's WindBuilders, CoolHome and CoolBusiness programs seek to support renewable projects that offer both environmental and social value. NativeEnergy's primary focus is supporting the development of Native American sustainable energy development and associated economies. For example, in May 2003 NativeEnergy's first major project was commissioned in South Dakota on the Rosebud Sioux Tribe reservation: the first large-scale wind turbine to be owned and operated by a Native American tribe. Expansion plans of the Rosebud installation are now underway and are being supported again by NativeEnergy's green tag sales.

Other NativeEnergy projects have included a Minnesota project owned by the GarMar Foundation and the Essex Junction Methane Project right here in Vermont.

In the interest of supporting Vermont farm methane projects, NativeEnergy is directing financial support through its Vermont CoolHome program to the Intervale Foundation's research and development. In early 2004, NativeEnergy will launch a major program in Pennsylvania, supporting the development of new farm methane projects there.

NativeEnergy customers include individuals from nearly every state and businesses and organizations that range from government offices to the Dave Matthews Band. Local customers include Ben & Jerry's, Green Mountain Coffee Roasters, Green Mountain Power, Chittenden Bank, and the Vermont Public Service Board and Department of Public Service.

NativeEnergy's senior management consists of Tom Boucher, President & CEO, and Tom Stoddard, VP & General Counsel, with offices in Shelburne, Vermont. You can learn much more about the company by visiting www.nativeenergy.com or calling (802) 985-9876.

Events

Monday, January 5, 2 p.m., Montpelier
Vermont Public Service Department Hearing on 2004 Vermont Comprehensive Energy and Electric Plan. Fourth floor conference room, Pavilion Office Building, State Street.

Tuesday, January 6, 7 p.m., Burlington
Vermont Public Service Department Hearing on 2004 Vermont Comprehensive

Energy and Electric Plan. Contois Auditorium, City Hall.

Wednesday, January 7, 7 p.m., St. Johnsbury
Vermont Public Service Department Hearing on 2004 Vermont Comprehensive Energy and Electric Plan. Municipal Board Room, Town Clerk's Building, 1187 Main Street.

Thursday, January 8, 2 p.m., Brattleboro
Vermont Public Service Department Hearing on 2004 Vermont Comprehensive Energy and Electric Plan. Select Board Room Town Hall, 230 Main Street.

Monday, January 12, 7 p.m., Rutland
Vermont Public Service Department Hearing on 2004 Vermont Comprehensive Energy and Electric Plan. Aldermen's Chambers, 52 Washington Street.

Tuesday, January 13, 7:00 p.m., East Haven
East Haven Demonstration Project's public Hearing before the Public Service Board. This four-turbine project is proposed for the abandoned cold war radar base on East Mountain and will provide approximately 30% of the electricity used by customers in the Lyndonville Electric Department service territory at below market rates. Hearing to be held at the East Haven Community Building (the East Haven School). All of the project's filings with the Public Service Board as part of Docket no. 6911, as well as other useful information, can be found at: www.easthavenwindfarm.com/filing.html.

About VREEM

VREEM is a monthly electronic newsletter published by Renewable Energy Vermont with a grant from the Vermont Department of Public Service and U.S. Department of Energy funds secured by U.S. Senator James Jeffords.

VREEM editorial staff:

Greg Strong
Andrew Perchlik
Bronwyn Becker

We want and need feedback and information from our readers. Please e-mail any comments, story ideas, events, complaints, diatribes, or unabashed praise to the editors at vreemnews@yahoo.com. The editors can also be reached via the REV office at 802-229-0099.

To subscribe to VREEM, please visit www.REVermont.org and click on "Newsletter Sign-up." To unsubscribe, send an e-mail to vreemnews@yahoo.org with the word "unsubscribe" in the subject heading. If you receive unwanted duplicates of VREEM, send us a message at vreemnews@yahoo.org indicating your preferred e-mail address.