



REV Conference Contemplates A Changed Vermont

Judging by the large turnout, the expertise of the featured speakers and panel leaders, and the enthusiastic discussion of the breadth of technologies being developed or employed in Vermont today, an observer at Renewable Energy Vermont's Fifth Annual Conference in Burlington on October 19 might have concluded that green energy had attained the force of a juggernaut in our state.

That conclusion would not have been entirely in error. There are Vermont-based entrepreneurs pursuing nearly every renewable-energy technology that comes to mind: domestic- and commercial-scale wind; solar power; farm and landfill methane; biomass fuels (wood and grass pellets); small-scale and community hydropower. If Lake Champlain were larger, no doubt someone would be proposing tidal generation for Vermont, as well. While in many places electric utilities are viewed as recalcitrant, if not hostile to technologies that might lessen the demand for their product, in Vermont some power companies are among the most eager supporters, developers and customers (current and potential) of alternative, affordable, cleanly generated energy.

The morning and afternoon

workshops were broad in scale. Topics included the status and potential for wind generation in Vermont (including an exploration of wind turbines' impact on wildlife, which was the basis for the state Public Service Board's rejection of the East Haven Windfarm proposal in July); agriculture's potential role in energy production; achieving Kyoto-level reductions in carbon emissions in Vermont; the local implications of "Peak Oil," and community-supported renewable energy projects.

The conference was held this year at the (fortuitously named) Wyndham Hotel, and drew a crowd that tested the confines of the conference hall. For featured events such as the keynote address by Chuck Kutscher of the National Renewable Energy Laboratory, the annual presentation of awards, and a pre-election debate between Gov. James Douglas and Democratic challenger Scudder Parker, it was standing room only. REV Executive Director Andy Perchlik later estimated this year's crowd at just under 400.

Yet despite the momentum that seemed apparent in the gathering, an air of concern and impatience hovered over the conference. If Vermont is so "green," people seemed to be

continued on page 4



Retiring U.S. Senator James Jeffords was praised and thanked at the REV conference in Burlington, where hundreds of his constituents rose to say, once more, "Thanks, Jim."

'Store's Open' WEC's 'Co-op Store' Continues

Way back when, in addition to selling electric power over its poles and wires, Washington



Electric Co-op sold appliances. Electric stoves, washers, dryers, freezers, water heaters, electric frying pans – you name it. What's now the welcoming Member Services Department in the front rooms at WEC's headquarters in East Montpelier was an appliance showroom, with a salesperson always on duty.

Along with the product came installation. In those days, people didn't necessarily have 240-volt circuits in their houses to go with the 120 volts that were good for lights and small loads, so WEC would provide a technician to wire the appliance correctly from the transformer outside.

There were two reasons the Co-op sold electric appliances. First was sell

continued on page 6

Inside

Award-winning Co-op. Washington Electric received an Industry Champion Award from Renewable Energy Vermont at REV's annual conference this fall. General Manager Avram Patt places some of the credit on WEC's dedication to the Cooperative Principles. Page 3.

2006 was a year of progress for WEC, but not without difficulties. See Barry Bernstein's end-of-year President's Report on page 2.

EVT 'chips' in to help a local potato farmer cut his costs. When Bob Chappelle wanted to modernize, EVT and WEC had advice and a helping hand. Page 8.

Will you 'chip in' for the WARMTH program? Operation Round-Up is an easy and effective way to do it. See page 8.



Political cartoonist Jeff Danziger was the guest speaker at the REV conference. Danziger contributed comic relief with a PowerPoint display of cartoons lampooning Ann Coulter, and other irresistible targets.

Washington Electric Cooperative

East Montpelier, VT 05651

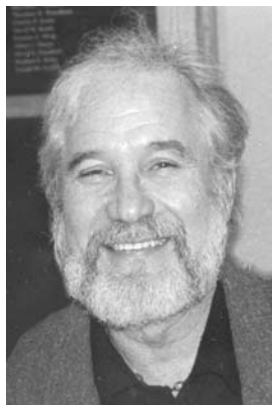
President's Report

Nuts and Bolts

Another Year of Power Production and Planning for Washington Electric Co-op

By Barry Bernstein

In 2006 your Cooperative had its share of highs and lows, but we are fully positioned for a successful new year.



Coventry generating plant

At this time last year we were six months into operation of our Coventry, Vermont, electric-generating plant, our engineers and consultants were working the anticipated "bugs" out of the system, and it was providing an increasing portion of our Co-op's electric needs. By the time we passed the one-year mark for the plant, in July 2006, it was generating a third of WEC's power.

Then, on August 8, we had a major fire (which was not related to, and did not damage, the plant's fuel supply of methane gas from the landfill). It shut

down the plant for three months. On November 9 we became fully operational again, and are now back up and running all three engines at full capacity. Our new fourth engine, overwhelmingly approved by 97 percent of our members in a special vote on October 31, will be on line before the end of December. We are looking forward to being able to

supply 50 percent of our base load energy needs in 2007 from this plant. I want to especially thank our WEC staff, including Manager Avram Patt, Director of Operations & Engineering Dan Weston, Director of Administrative Services Denise Jacques, and Finance Director Linda Nelson, along with Co-op member John Warshow, Co-op Treasurer Don Douglas, and your Washington Electric Cooperative Board

of Directors, all of whose involvement and energy made sure that a significant setback (the fire) was only a temporary obstacle.

Also thanks to Chet Layman and Bernie Demag of the Pizzagalli Group; Albie Bourne and Mike McLam of

Bates & Murray; Ward Butler, Dennis Plaster and Chris Poirier of Milton CAT; Pete Zeliff Jr., Scott Wilson and Dennis Lamere of Innovative Energy Systems; John Murphy and Al St. Peter of Stantec (formerly Dufresne-Henry);

continued on page 5

The Vermont Public Service Board requires all electric utilities to publish this Herbicide Use Notification periodically. Members of Washington Electric Cooperative are reminded, however, that it has long been the Co-op's policy not to use herbicides in power line rights-of-way. We do not use herbicides in our reclearing program or on members' property. This Co-op does occasionally make limited use of herbicides to control weed growth within our own substations.

PUBLIC NOTICE PUBLIC NOTICE
HERBICIDE USE NOTIFICATION

Vermont utilities maintain electric line rights-of-way with several methods, including the selective use of herbicides on trees and brush. They also encourage low-growing shrubs and trees which will crowd tall-growing species and, thus, minimize the use of herbicides. The application of herbicides may start as early as April 1. **Requests to utilities for notice by mail, however, must be made by February 15.**

The Public Service Board requires Vermont utilities to carry out vegetation management techniques which allow maintenance of electrical systems in a cost-efficient manner.

The types of herbicide treatment used to keep utility lines clear are: stump, injection, basal, soil and foliar. These are the common methods used, although they may not all be used by the utility in your town. Landowners have the options of requesting herbicide treatment on cut stumps only, or that no herbicide be used at all. In the latter case, an administrative fee would have to be paid to the utility. Only electric utility rights-of-way which have tall-growing tree species with the potential of threatening the electric utility system are treated.

Utilities advertise by radio and newspaper prior to herbicide applications on all lines. Lines usually are treated only once in a four-to-six year period depending on the specific management cycle of the utility. Please check with your utility regarding the cycle of a particular line.

Some utilities use metal letters and numbers on distribution and transmission line poles. Others use them only on transmission lines. The letters, such as V.E.C. (Vermont Electric Co-operative), or V.E.L.C.O. (Vermont Electric Power Company), are not found on every pole. A check of several poles on a line should aid you in determining whether poles are marked and which utility is the owner.

Persons owning or occupying land within 1,000 feet of a utility right-of-way may request in writing that the utility notify them individually by mail anytime, but at least 30 days prior to treatment of the line with herbicides. The landowner or resident is responsible for contacting the utility, in writing, to request placement on the mailing list. The utility should be provided with sufficient information as to the exact location of the residence and land. It is the duty of each landowner or resident to make the utility aware of the location of any potentially affected water supply, and any environmentally sensitive areas where herbicide application ought to be avoided.

CONTACT YOUR ELECTRIC UTILITY WITH QUESTIONS OR SUBMIT THE COUPON PROVIDED

If you have further questions or concerns contact:

Plant Industry Division, Agency of Agriculture
Phil Benedict, Director
116 State St., Montpelier, VT 05602
1-802-828-2431

Consumer Affairs & Public Information
Dept. of Public Service
112 State St., Montpelier, VT 05620
1-800-622-4496 or 1-802-828-2811

COUPON FOR PERSONAL REQUEST

Name	Town/City of Affected Property
Street Address	Telephone Number (Home)
Town	(Work)
State	Zip Code
Electric Account Number	O.K. to use Work Number: Yes <input type="checkbox"/> No <input type="checkbox"/>
Property of Concern: <input type="checkbox"/> Year Round Residence <input type="checkbox"/> Summer Residence <input type="checkbox"/> Commercial Property	Best Time to Call
<input type="checkbox"/> Water Supply <input type="checkbox"/> Land <input type="checkbox"/> Other	
Line and Pole Identification: Utility Initials	Numbers
We need all of this information in order to determine if you qualify for personal notification. If information is unobtainable, please state why. Use an extra sheet of paper if you need more space.	
RETURN TO YOUR LOCAL UTILITY	
VELCO07	

Co-op Currents

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WEC is part of the alliance working to advance and support the principles of cooperatives in Vermont.
www.vermontcooperatives.coop

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The Board of Directors' regularly scheduled meetings are on the last Wednesday of each month, in the evening. Members are welcome to attend. Members who wish to discuss a matter with the Board should contact the president through WEC's office. Meeting dates and times are subject to change. For information about times and/or agenda, or to receive a copy of the minutes of past meetings, contact Administrative Assistant Deborah Brown, 802-223-5245.

Patt Accepts REV Award On Behalf of the Co-op

Washington Electric Cooperative General Manager Avram Patt received the 2006 Renewable Energy Industry Champion Award at the Fifth Annual Conference of Renewable Energy Vermont (REV) in October. The organization cited WEC's accomplishment in developing the Coventry landfill gas-to-energy plant, WEC's unwavering support of the proposed 40-megawatt UPC-Vermont Wind project, and the Co-op's "strong advocacy for renewable energy and conservation."

In accepting the award, Patt emphasized that the credit rightfully should be shared with the rest of the staff, with the WEC Board of Directors, and with the Co-op's entire membership. His acceptance speech is transcribed here.

Avram Patt:

"Thank you very much. And I really did mean it when I said that this should not be an award for me. A week ago I was in this room attending a statewide conference of co-ops of all kinds, because October is National Cooperative Month. While being a cooperative business is certainly not a prerequisite for being an advocate for renewable energy, in Washington Electric Cooperative's case there's an absolute and direct connection. There are seven internationally accepted cooperative principles that any good co-op follows, and if you follow them they lead you on a path of social responsibility and environmental responsibility. And that's how we got here.

"We're accepting this award on behalf of our 10,000 members in the communities we serve, who elect the board of directors – most of whom are here today. Our board has been actively involved in steering Washington Electric Co-op on the path first and foremost of energy efficiency and conservation, and then when we started to have opportunities to change our power-supply portfolio and to change it in more than symbolic ways. The Coventry landfill-gas project is currently providing a third of our power, and will be doing that for over 25 years – and just got approved by the Public Service Board for expansion, and our members are in the process of voting right now to ratify that. And it will eventually supply half of our power-supply needs.

"And our members are not just consumers. They, as the owners, are also the developers, and as a result they benefit from the sale of renewable energy certificates. And I should say that as a result of that, that [Coventry-generated] energy does not count as renewable in our energy portfolio, for



General Manager Avram Patt accepting REV's Renewable Energy Industry Champion Award: above, with Board members Don Douglas, Roger Fox, Marion Milne and Barry Bernstein (left to right). At right, Patt shows off the Co-op's new plaque.

regulatory reasons.

"The plant is a very significant achievement for Washington Electric Co-op obviously, and we had the support of the Department of Public Service and the Agency of Natural Resources. We had no interveners and no opposition.

"So rather than just basking in the warm glow of everyone's universal praise, which we really do appreciate, I would remind everyone that Vermont, fortunately, does not send enough garbage to landfills to generate one-third of the total state energy supply. There's no question that we have the ability here to come up with the megawatt-hour equivalent of at least one of Vermont's existing large base load sources through renewables, and many people in this room would argue that we could do a whole lot better than that.

"To do that, there are really two basic approaches – and we need to do both of them. One is smaller-scale renewables, which are being talked about and discussed at this conference and all over the state these days. There's a huge potential in farm methane, biomass, micro-hydro, development of new agricultural endeavors – and that potential goes way beyond just the generation of electricity. And again, doing the small stuff is politically popular and Washington Electric Co-op thinks it's great, too. We do want to remind people, though, that small wind and changes in uses of our agricultural and forest lands have environmental and aesthetic impacts, too.

"But since everyone agrees on the small stuff, I'd like to finish our thank-you here by talking about commercial-scale wind development. Washington Electric


ultimately chose to be a part of UPC's proposed project in Sheffield and Sutton, but I do want to say that it's a shame that that is the only project pending before the Public Service Board right now. (APPLAUSE)

"Our members and Vermonters overall support commercial wind farms at carefully selected locations in Vermont. Co-op members ask me all the time – members of all political stripes and persuasions and ages – they ask, "What is the problem? Why is our state government opposing wind development?" and I don't have a good answer. In my job, every day I read what other states are doing to champion renewable energy and embrace wind, and it's getting embarrassing talking about Vermont being a leader in all things good and green.



"While being a cooperative business is not a prerequisite for being an advocate for renewable energy, in Washington Electric Cooperative's case there's an absolute and direct connection."

"Making a fundamental change in our energy supply cannot be anything other than visible. We cannot hide where electricity comes from, nor can we hide from it. The definition of Vermont-scale cannot be limited to some nostalgic notion of what Vermont used to be and really never was. Vermonters have a long tradition of using all of our resources, and that includes scratching out every kilowatt-hour and every BTU out of all the small resources that are all over Vermont. And it also includes embracing wind power and seeing some of it on our ridgelines.

"On behalf of our board and our members, thank you very, very much for this award." 

Washington Electric Cooperative, Inc.

Statement of Non-Discrimination

Washington Electric Cooperative, Inc. is the recipient of Federal financial assistance from the Rural Utilities Service, an agency of the U.S. Department of Agriculture, and is subject to the provisions of Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973, as amended; the Age Discrimination Act of 1975, as amended. In accordance with Federal law and the U.S. Department of Agriculture's policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, religion, age, or disability (Not all prohibited bases apply to all programs).

The person responsible for coordinating this organization's non-discrimination compliance efforts is Avram Patt, the Cooperative's General Manager. Any individual, or specific class of individuals, who feels that this organization has subjected them to discrimination may obtain further information about the statutes and regulations listed above from, and/or file a written complaint with, this organization; or write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer."

Confidentiality will be maintained to the extent possible.

REV Conference

continued from page 1

wondering (and some, including featured speakers, said outright), why aren't we getting anywhere? People questioned whether Vermont's regulatory climate and political leadership were equal to 21st-century energy and climate challenges.

House Speaker Gaye Symington phrased it aptly as she accepted a Legislative Champion Award.

"The question that I ask myself often is, what am I going to answer my great grandchildren when they ask, 'What did you do to prepare for our security?'" My children have a great grandmother who is very much a part of their life, and I think they're aware of the kinds of choices that that generation made – that they were thinking ahead, that they were paying their bills as they went, that they were saving, they were thinking about opportunities for the future.

"Are we doing the same for our great grandchildren? Will you say to your great grandchildren, 'I took the risk of creating even more radioactive waste for you to manage, in order that I could super-cool my office building, or build televisions into refrigerator doors, or blow dry my hair every morning?' Will you say that 'I used the petroleum-based products you might have needed for medical and surgical life-support systems, or heart valves and anesthesia, so I could fly lettuce 2,000 miles to my table in September'?"

"How will you answer your great grandchildren? What did you do to preserve their share of that fossil fuel-energy inheritance? It's a gift from our earth's evolution. Will you answer them, 'I burned it'?"

"We have a lot of work ahead of us, so we don't have to give them that answer."

Jeffords acclaimed

Symington received one of four awards handed out at the conference. An Industry Champion Award went to Washington Electric Cooperative, in recognition of its landfill-methane power plant in Coventry and its support of the UPC-Vermont Wind project proposed for Sheffield and Sutton. (General Manager Avram Patt's remarks in accepting the award appear on page 3.)

Retiring U.S. Sen. James Jeffords received a Lifetime Achievement Award – and two prolonged standing ovations from an appreciative crowd. Presenting the award, retired Green Mountain Power vice-president Steve Terry said that Jeffords "believed long ago, before many knew that we could have a clean-energy future, and could live in a world with a greatly reduced carbon footprint." Jeffords formed a Congressional Solar Coalition as

freshman Congressman in 1975, and over the years secured funding for some of Vermont's pioneering energy research companies. Alluding to GMP's wind farm in Searsburg, Terry added, "We wouldn't have 10 years of wind in this state but for the work that you've done."

'Holocaust'

Chuck Kutscher not only holds a doctorate in engineering, which he applies in his work with the National Renewable Energy Laboratory. He is also a dedicated scuba diver, with a passion for coral reefs. He admires them for their beauty and the diversity of aquatic life that teems around them, and for their potential for pharmaceutical and other benefits to humanity.

Their condition now, he said, is nothing short of "an underworld holocaust." Due significantly to global warming (which causes an alteration of the oxygen exchange between the oceans and atmosphere), scientists estimate that a third of the world's coral reef resource has died.

The keynote speaker said that climate change, caused "primarily" from burning fossil fuels, was "getting worse faster than anyone predicted." A middle-aged

man, he said atmospheric carbon dioxide had increased 23 percent during his lifetime.

Yet there was no time for hand-wringing. Kutscher outlined specifically the

contributions that various forms of intercession could make in slowing global warming – improving buildings' envelopes to reduce their energy loss; imposing vehicle fuel standards, achievable through lighter materials and better engine design; expanding the use of heat recovery and co-generation in industries. He also described what "limiting the damage" might look like over the next few decades: holding additional warming to 1 degree Celsius; a 20-percent loss of species, and a one-meter rise in sea levels.

The sacrifices to achieve these and other goals fairly fall largely on the United States. "We emit 5.5 times per person more [greenhouse gases] than the world average."

Still, he said, a positive attitude was vital for making progress. Paraphrasing the movie "Apollo" (and the actual space expedition it dramatized), Kutscher said the message should not be, "Houston, we've got a problem," but "Houston, we've got a solution."

Breeze building

The REV conference coinciding with the 10th anniversary of GMP's "pilot" wind-energy project at Searsburg struck some people as ironic: No one complains about Searsburg these days, including folks who live near it; you don't hear about Searsburg "going down" like Vermont Yankee, and it doesn't

"Will you tell your great grandchildren 'I used the petroleum-based products you might have needed for medical and surgical life-support systems, or heart valves and anesthesia, so I could fly lettuce 2,000 miles to my table in September'?"

— House Speaker
Gaye Symington



produce radioactive waste that threatens to threaten human life for millennia if it should ever escape its storage pools and dry casks (and who can imagine it won't?).

But the pilot project seems to have piloted nothing, because no second project has been approved.

Anna Giovinetto of Noble Environmental Power (based in Connecticut) implied that it was only a matter of time before wind feels the regulatory breeze not in its face but in its sails, because New England's energy picture is so problematic.

"Our current paradigm is not sustainable," she said. "New England is facing a capacity crisis, and a lot of our electricity is coming from the most expensive fuel that's out there – natural gas."

Her company, involved in wind farms in three New York counties, has experienced these advantages of wind power: "It's the least-expensive source of new generation because you don't have fuel costs; it has a great impact on stabilizing energy prices; it is intermittent, but intermittent does not mean unreliable [because wind resources]

are predictable; it creates hundreds of short-term jobs during construction, followed by permanent positions when it's operating; it contributes local taxes; and it's the easiest power [technology] to decommission – it's just a few days work."

Giovinetto suggested the main obstacles in Vermont came from vociferous (but minority) wind opponents, from a lack of gubernatorial leadership, and from dubious regulatory hurdles. The four-turbine East Mountain Demonstration Project, for example, was rebuffed by the Public Service Board, which said the developers failed to provide data on wildlife – particularly bird and bat – mortality from wind turbines.

Bob Roy, a wildlife biologist with Woodlot Alternatives Inc. of Topsham, Maine, said a reason for the dearth of wildlife-related data was that you need working wind-power installations to collect information that stands up to scrutiny. An early wind farm in California killed thousands of raptors in the 1980s, but that doesn't translate to songbird and bat carnage at a modern turbine site in the northeastern mountains today, he explained. The important variables

"Developing agriculture-related energy supplies will not only soften the impact of oil depletion, but will be a tool for building healthy communities."

— Netaka White,
Vermont Biofuels
Association



include the location and configuration of the turbines, the habitat presence, and the flight height and habits of migrating birds. Roy offered an estimate of six bird collisions per turbine per year, a relatively low mortality rate for a 15-to-30-turbine project. Collisions with bats could be greater – biologists know less about their flying patterns and defenses – although developers are experimenting with high-frequency radio emissions to repel bats from turbine areas.

His message was that as long as we're only speculating, we'll never really know how much wind farms will affect wildlife. As one conference participant put it, "You don't learn by just saying no."

Oil's 'Manhattan Project'

The other primary arena for energy consumption, besides electric power, is transportation, which made the "Peak Oil" session one of the conference's most interesting. Peak Oil is defined as the point at which half of the world's endowment of oil has been depleted, following which the per-unit cost of production climbs while the yield diminishes. Some argue we're past Peak Oil, others that it's a few years or even a few decades down the road. (Some dispute the concept altogether.)

The implications of Peak Oil are sobering. We have come to rely on oil not only for personal transportation – Vermont is the ultimate one person/one car state – but for such life-essentials as heat and food.

"We need to find new ways to move people around," said moderator Carl Etnier of the Vermont Post Oil Network. "We need to find new ways to move goods around, and get them from a shorter distance away. Most of our food comes from west of the Mississippi."



Members of the panel discussing the issue: "Beyond Peak Oil – Relocalize Now!"

Etnier said that preparing for Peak Oil will require an effort on the scale of the Manhattan Project (a crash project to produce an atomic bomb before Nazi Germany did it). Some Vermont officials are already launching mini-Manhattans. Scott Johnstone said his group, the Chittenden County Municipal Planning Organization, envisioned linked public-transportation systems that would be useful for both urban and rural Vermonters. State Rep. Jim Masland of Thetford, vice-chair of the House Committee on Natural Resources and Energy, discussed government's limitations in crafting solutions to major social and economic problems.

"It's the role of government to

convene the forums in which we can collectively develop solutions to the problems that face us," Masland said. "But in a free society changes depend on individual behavior."


Some panelists and participants saw positive implications for Vermont as it contemplates Peak Oil.

"It's important not to use end-of-world imagery," said Netaka White of the Vermont Biofuels Association. "We can use the challenges as a hopeful model for how we want to live our lives."

"The way forward will involve consuming less, weaning ourselves from the notion that we can drill or mine ourselves out of this problem," said White. "Developing agriculture-related

energy supplies will not only soften the impact of oil depletion, but will be a tool for building healthy communities."

He envisioned a future – a near future – when Vermont farmers would be producing 20 million gallons of biodiesel fuel on 50,000 acres of farmland (with more being produced by algae). When an audience member asked, "Does this threaten to compete with dairy?" White replied, "I'd be surprised if by 2017 Vermont agriculture will still be primarily dairy."

Shakespeare might have called the Vermont that lies ahead of us a brave new world. Brave or not, it's clear that decisions loom for our state and nation that are of the greatest magnitude. 

President's Report

continued from page 2

Josh Diamond of Diamond & Robinson, Stan Faryniarz of La Capra Associates, and many staff members at our sister co-op, Vermont Electric Cooperative – all of whom came to our rescue to give support and do everything necessary to get the plant back into production two to three months ahead of projections.

Wrightsville hydro plant

We are proud to announce that with great staff support under the supervision of Steve Anderson and with help from Mother Nature, WEC's hydro generating plant in Middlesex had a record year, producing more than 3,500,000 kilowatt hours (kWh) – 30 percent above our normal production.

UPC Sheffield/Sutton wind project

The wind electric-generation project proposed by UPC-Vermont Wind, from which WEC plans to purchase approximately 10 percent of our power supply once it is constructed and begins

operation in 2008, is making its way through the regulatory approval process, and we hope for a positive outcome. Hearings before the Vermont Public Service Board are scheduled to begin in January. UPC is working on, and is optimistic about, coming to agreement with other Vermont utilities so that all the project's power would be sold within the state, making the project entirely a Vermont enterprise.

In response to the public-input process, UPC has reduced the number of turbines (from 26 to 16) and the output of the project (from 52 MW down to 40 MW). While there is still strong vocal minority opposition, there is also a majority of Vermonters who support wind projects on our ridges and realize that they are a critical part of Vermont's renewable energy supply future. It will be important in the next several months for those of us in the majority to write letters of support for the UPC project to local papers in your area.

Transmission/Distribution

2006 saw further progress by your


Co-op to improve the quality and reliability of the infrastructure through which we provide power to some 10,000 Co-op members over a distribution system that now exceeds 1,200 miles.

Maple Corner Substation: In September, WEC energized its rebuilt Maple Corner substation, which completes the rebuild and upgrade of 50 percent of the eight substations serving our members. The reconstruction of the Maple Corner facility followed work on the South Walden, Moretown and West Danville substations. Many thanks to our WEC engineering and line crew members, who have done the construction work themselves on the last three substations. Thanks also to our Co-op members, who gave their overwhelming support (95 percent of the vote) to our substation project, as part of our rebuilding program, at last May's Annual Meeting.

Right of Way: As part of your Co-op's efforts to improve reliability in our service territory under the direction of

Dan Weston, our Director of Operations, and forester Mike Myers, our Right-of-Way Coordinator, and with the assistance of our employees and right-of-way (ROW) contractors, your Board of Directors has continued to boost the ROW budget, resulting in a 40-percent increase (above inflation) in the past five years. As part of this effort we have continued to support a "danger tree" removal program, and systematic checking and treatment of the Co-op's 24,000 distribution poles. This ongoing campaign reduces outages and extends the life of our system's infrastructure.

Best wishes

As 2006 winds down and we move into the new year, I want to thank all our WEC employees for their work and commitment to our Cooperative. I want to wish them, their families, and all of our members and their families, a healthy and happy holiday season, and a good new year. 

Co-op Store

continued from page 1

electric power. Rural electrification has always been an iffy prospect economically, and the early Co-op needed to boost its power sales to survive.

The second reason was that central Vermont was very rural in the 1940s and '50s. There were thousands of farms on the new Co-op's system, and those farm families rarely got to town; which meant that they had less exposure to, and less opportunity to buy, the kind of labor-saving devices that had transformed the lives of folks in population centers like Barre and Montpelier.

So WEC advertised the appliances in *Co-op Currents* and helped get them into people's homes.

The main reason WEC stopped selling appliances was that times changed; people were less isolated, and could drive to town and make their purchases on their own.

Which bring us to The Co-op Store.

The Store still exists – except now there's no showroom, just a display on page 7 of each issue of *Co-op Currents* and a clickstop on www.washingtonelectric.coop.

Nevertheless, some things are the same – mainly, the reason to have a Co-op Store.

"There are products and services that we are in a uniquely good position to offer our members," says Products & Services Director Bill Powell, who spends most of his time working directly with members needing technical services, but also doubles as the Co-op Store's shopkeeper. "We make money on some things; other things barely pay for themselves. But volume-of-sale is not something the Board of Directors has asked me to achieve. The Board's policy is that the Store is a service."

When a particular service is no longer needed, the product line disappears – just like washers and dryers disappeared from the Co-op's showroom when they became more readily available to WEC's rural membership. An example is compact fluorescent bulbs (CFLs). WEC advertised them through The Co-op

Store for a few years because they last 10 times longer than standard electric bulbs and use only one-third as much electricity, thus reducing the household electric bill. Therefore, the Co-op wanted to encourage its members to use CFLs, but they were costly and hard to find. So WEC located a distributor who would sell to WEC members at a discount.

CFLs are no longer listed in The Store, and the reason is that members don't need this service anymore.

"The market has changed," Powell explains, "and that's a good thing. There are 130 stores in Vermont now that sell CFLs. The retail cost is subsidized by the energy-efficiency charge we all pay on our electric bills, and those moneys go into supporting the market and providing point-of-purchase discount coupons."

'Pushing' whole-house surge protectors

The Store has a limited inventory right now. But the Co-op stands behind everything that's listed, and believes the items are worth members' consideration.

The primary "product" – something you could pick up and hold – is the TESCO whole-house surge protector.

"This has been our single most-successful product," says Powell. "Any house with electrical stuff in it that could be damaged by a power surge should have one of these. And that means 100 percent of the houses on the system."

Power surges have a variety of causes, which makes sense when you consider that power lines are exposed to the elements for miles and miles on their way to your house. The Co-op installs protective equipment on the system to try to prevent surges, but they still can happen. In fact, they can occur on a home's internal wiring.

Most people have learned to protect their computers and other sensitive equipment by plugging them into a power strip, but that safeguards only the items connected to that particular outlet. Nearly all electrical products are vulnerable to damage from surges: resistant loads (examples are electric space heaters and hot water heaters), electric motor loads (like refrigerators and pumps),

and solid-state loads (anything with an internal power supply and a "chip" in it – computers and home-entertainment systems, obviously, but increasingly refrigerators and other large devices are becoming computerized).

"We are associating ourselves with this product because people need it," Powell emphasizes.

The whole house surge protector must be installed by a licensed electrician or technician – and WEC can send its own if the buyer wishes. Powell adds that homeowners might be able to secure lower insurance costs from their agents because they are virtually removing a category of potential damage to household property. And – the TESCO device comes with a policy of its own.

Does the Co-op make a profit on these sales? In a word, yes.

'Dial' services

The other major items currently featured in The Co-op Store are a dial-up Internet service and a long-distance telephone service. After the Vermont statute controlling electric cooperatives was updated in 1999, Washington Electric and Vermont Electric Co-op were allowed to engage in new member services. WEC surveyed its membership and identified an interest in these two kinds of services. The Co-op then set out to find providers that it could confidently recommend to the membership.

"The long-distance phone service is available to us through the National Rural Telecommunications Cooperative," says Powell. "NRTC selected the provider, Powernet Global, which is a for-profit

company. We're a member of NRTC, and we have faith in them. This is a good deal for most low-use or moderate-use members, although some high-use members and businesses might find a long-distance service with a lower cost-per-minute. But these guys – Powernet Global – haven't changed their pricing in four years except for the addition of one small fee."

The customer pays Powernet directly, and Powernet sends WEC a modest commission check each month.

The Vtlink dial-up service is a local company, which WEC selected after considering several alternatives. (Vtlink was recently purchased by Powershift of Stowe.) To some, it may seem anachronistic to market dial-up in this age of high-speed Internet connections – but those "somes" don't live in Co-op country.

"We got into dial-up because a large share of our membership will be waiting a long time before something faster is available, because of where we live," Powell explains. "Dial-up still serves a big slice of the market – including myself."

Washington Electric buys the service wholesale, and retails it to the members. That way, people can pay their electricity and Internet bills together, adding convenience to the other reasons for considering getting this service, too, from your electric co-op.

"It's not a big money-maker for us," says Powell. "We make it available because it's local, reliable, and all-in-all a good value."

That makes it a good fit on the shelves of Washington Electric's "Co-op Store."



WASTE NOT

Reducing solid waste is a goal most WEC members can agree on. The Co-op reduces the waste stream's harmful impact by collecting the methane gas at the NEWS landfill in Coventry and using it to generate electricity.

In this space, we help Co-op members find their own ways to reduce Vermont's wastestream, with tips about recycling, composting, the proper disposal of hazardous materials, and how to avoid generating some kinds of waste in the first place. Our information comes from the Central Vermont Solid Waste Management District (CVSWMD.org) and other sources. Readers can submit ideas or questions for Waste Not by contacting Washington Electric Cooperative.

Cell phones. Talk about a successful product! There's been a virtual explosion in cell phone use in a short period of time. In 1992 less than 1 percent of the world's population had cellular phones. Ten years later 18 percent had them, and the percentage has surely grown. Increasingly, people are forsaking land lines and using only cell phones. This is true in Third World countries as well, where there is a reasonable argument to be made for skipping the dissemination of wire-based communications and going right to wireless infrastructure.

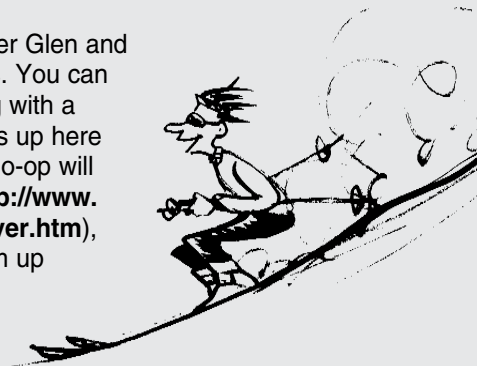
However, we're generating a major new waste product: old cell phones, which contain semiconductor chips, liquid crystal display, and batteries – all environmental hazards. The best thing to do with unwanted cell phones is to recycle them, either socially, by donating them to organizations with clients who can use them, such as Battered Women's Shelters or agencies that directly serve low-income clientele (call first to make sure they want them), or at recycling depots. The Central Vermont Solid Waste District depots in Barre Town, Northfield and Hardwick recycle cell phones for free. You can also visit the Rechargeable Battery Recycling Corp. website (www.rbc.org) to look for drop-off locations at retail businesses that accept used electronics with cadmium, lithium and similar batteries.

Now, Call WEC for Mad River Glen Tickets

The geese have flown south, the temperatures have plunged, and ski season is coming! This year the Co-op has an improved deal for WEC members who ski at Mad River Glen – which is also a cooperative. You can now purchase day passes at the Co-op office. The ticket price varies depending on the day, but weekday adult passes are one-third off, compared to tickets purchased at the basebox.

WEC is a ticket retailer for Mad River Glen and members are eligible for special prices. You can call and order tickets by phone, paying with a credit card, then either pick your tickets up here or have us put them in the mail. The Co-op will fill orders placed from the website (<http://www.washingtonco-op.com/pages/madriver.htm>), but members must still either pick them up or have them mailed to your address. This is not an electronic ticket offer.

See you on the mountain!



'NEWS' from Coventry:

WEC's Power Plant Back On Line, And Growing

The news from "up north" (in Coventry, Vermont) is good. WEC's generating station, which produces electricity from engines powered by methane gas collected at the state's largest landfill, is back in operation after an August fire. That will reduce the Co-op's temporarily increased reliance on more-expensive power from the electricity "spot market."

The news from central Vermont is good, too. Here at home, Washington Electric's members voted overwhelmingly on October 31 to support an expansion of the Coventry plant. A new (fourth) engine will be in service before the end of the year, which eventually will enable WEC to generate up to 50 percent of its power needs at the Coventry facility.

With the invaluable assistance of an array of contractors and consultants (see the President's Message on page 2), the Co-op was able to recover from the August 8 fire in the plant's generating room more quickly than expected. The equipment itself was not seriously damaged, nor was the gas-collection system within the landfill affected. WEC was able to restore the three original Caterpillar engines to their stations in early November, and on November 9 the plant resumed full operation. Soon it was producing almost 4.8 megawatts (MW) of electricity.

Meanwhile, Co-op Manager Avram


With the addition of the fourth engine WEC will soon be able to take advantage of the improved gas-collection system to increase power output.

That bodes well for Washington Electric, because with the addition of the fourth engine it will soon be able to take advantage of the improved gas-collection system to increase power output from the plant. The plant's generating capacity is expected to climb to 6.4 megawatts. Washington Electric members voted 1,670-51 in favor of

Patt reported that Casella Waste Management Inc., which owns the NEWS landfill at Coventry, had made improvements to the landfill's gas-collection system, and added new wells to capture the gas produced by organic decomposition within the landfill.

the additional engine in a special vote held on October 31, which followed the Vermont Public Service Board's approval on October 5.

WEC had always planned to add generating capacity as the volume of methane gas created by the landfill increased. The plant was designed with room for the addition.

Work on installing the fourth engine commenced shortly after the three original engines were back in place. The new engine is expected to be operating before the end of the year, eventually increasing the facility's output to 6.4 MW. The Coventry station will provide half of the electricity consumed by WEC's 10,000 members, for the next quarter-century, at stable, below-market cost. 

WEC CO-OP STORE

WHOLE HOUSE SURGE PROTECTION

Protect Individual Appliances, Valuable Equipment with a meter-based SURGE DEVICE. Be Safe, Not Sorry! Special Member Discounts!



A Full Line of "Plug & Play" (DIY installation) Surge Devices

Panamax MAX 2 SPECIALS!

Highest protection, compact size. Three models, all in stock. Offer good through January 2007.

Product	List price	Member discount price
Max2	\$39.95	\$32.95 (save \$7.00)
Max2 Coax	\$49.95	\$34.95 (save \$15.00)



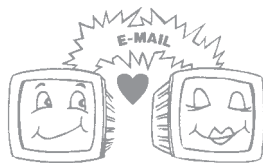
If you own a single item such as a TV, a VCR, a computer connected to the internet by a cable or satellite provider, audio equipment or pay TV service, without surge protection you'll have to make up the replacement cost out of pocket in the event of a surge striking. Full protection, and an iron-clad warranty for all connected equipment.

Your equipment is exposed to power surges until you connect your equipment to one of the Panamax heavy-duty Max2 family of products. Be safe, not sorry!

HAD ENOUGH OF THE BIG BOYS?

Try Vtlink's Switch-It Program!

Vtlink along with WEC will give you one-month NO CHARGE service for simply switching to Vtlink. Sign up today and receive one-month service FREE, then pay only \$17.95 per month billed by WEC. E-mail weclink@vtlink.net with your WEC account #, name, phone, and a time to contact you. Customer service will respond to help you make the switch. Offer applies to new customers only!



Co-op Long Distance Telephone Service

- 5.9 cents per minute (outside VT)**
- 8.9 cents per minute (within VT)
- No per-call or monthly minimum
- 6 second billing interval
- No gimmicks

Billed by Powernet Global. Call to sign up today: 1-866-216-0332, or www.washingtonelectric.coop/pages/phone.htm or call the co-op with questions: 1-800-932-5245.

** 4.9cpm if billed online.



Call the Co-op at
800-932-5245
or visit us on the web at: www.washingtonelectric.coop/pages/prod.htm

Will You 'Round-Up' For Neighbors In Need?

Most people would agree that a little WARMTH is a good thing. WARMTH is the program by which Co-op members can provide heating assistance to people in need – people who well might be their neighbors.

WEC provides two ways to donate to WARMTH. Co-op members can make direct contributions in response to a once-a-year solicitation that comes in the form of a brochure enclosed in an autumn electric bill. (Responses to that brochure can be made at any time).

Or they can give to WARMTH through Operation Round-Up – the form for which is printed on this page. When you sign up for Operation Round-Up you authorize Washington Electric to round your electric bill up to the next-highest dollar amount, and the change – anywhere from a penny to 99 cents – goes into a fund that WEC forwards to WARMTH each month. Round-Up is a small, virtually unnoticeable way to make steady contributions to a program that protects people from losing their heat, and in certain cases their electricity.

In 2005 – the last year for which we have complete figures – the total contributed to WARMTH from WEC members was \$13,761.15. Of that amount, \$9,083.27 came from Operation Round-Up. (That compares to \$8,374.89 from two years earlier – 2003.)

At the end of 2005 there were 1,547 Round-Up participants. As we approach the end of 2006 we have 1,917 members participating in Round-Up, and WEC has received \$8,509.23 for the program, ensuring that the end-of-year total will exceed last year's.

But the calendar year – the transition from 2006 to 2007 – doesn't really have anything to do either with people's needs or people's compassion. With just under \$14,000 in WARMTH donations from a Co-op membership of around 10,000, the average contribution (if everyone were participating) is a little more than \$1.

It would be nice to do more. Please consider adding your name to the Round-Up list. And if your name is already there, WEC's staff and Board of Directors extend their thanks.



A 'Sweet' Potato Deal

Bob and Barbara Chappelle are the only commercial potato farmers on WEC's system – and in fact are one of only two such operations in the state. They've been harvesting potatoes on 100 acres of land in Williamstown since 1982. But after attending an agricultural conference last winter Bob confronted the fact that it was time to incorporate new technology into the business (Chappelle's Vermont Potatoes). Spuds are like people, says Bob. "They're living organisms that consume oxygen and give off heat and carbon dioxide." Successfully storing a million and a half pounds of potatoes in the Chappelles' two large bins requires an aerating system that keeps the temperature at 38 degrees and the relative humidity at a high 95 percent. "You don't want to lose moisture, because potatoes are sold by weight," Bob explains.

So the Chappelles invested in a new, computerized ventilation system that includes a humidifier and a fan (attached to a plenum, which propels air through a series of ducts beneath the potato piles). The fan is controlled by a "frequency drive"; it converts the single-phase 120-volt power from Washington Electric Co-op into 240-volt, three-phase power, and varies the speed of the fan to conform to readings from the computerized control panel. The benefits are twofold: reducing shrinkage caused by moisture loss from 5 percent to less than 2 percent, which Bob estimates will translate to an additional \$10,000 in crop value per year; and cutting his power bill by perhaps 20 percent.

Bill Powell of Washington Electric fielded Bob's initial questions about the electricity implications for the proposed renovations, and put him in touch with Efficiency Vermont (EVT). The potential energy savings inspired EVT to work closely with Bob, so that after the system was installed – and inspected by EVT's Taurin Spaulding, pictured here with Bob Chappelle at the potato farm in December – EVT sweetened the deal even further by presenting the Chappelles with a \$500 check as a reward for decreasing their energy use.

Above, Williamstown potato farmer Bob Chappelle (in cap) describes his packaging machinery to Taurin Spaulding of Efficiency Vermont. With assistance from EVT and Washington Electric, Chappelle installed equipment that reduces his energy usage and improves his storage operation. Below, Chappelle and Spaulding at the new control panel. (photos by Bill Powell)



Operation Round-up Consent Form

Operation Round-Up allows Co-op members to round up their monthly electric bill to the next dollar amount, or to designate any other specific additional amount. Funds from this effort will be distributed to the Vermont Community Action Agencies within the counties served by the Cooperative and will be used to assist individuals facing emergency situations, as determined by the Board of Directors.

To sign up, complete the form below and return to Washington Electric Cooperative, P. O. Box 8, East Montpelier, VT 05651. If you have more than one WEC account, please indicate the account(s) you wish to round up.

Yes, I want to participate in WEC's Operation Round-Up.
Please round up my monthly electric bill to: (check one)

- the nearest dollar amount; or
- the nearest dollar amount, plus an additional \$ _____

Name(s): _____

(Print) _____ (Signature) _____

Account #(s) _____ Map #(s): _____

Account #(s) _____ Map #(s): _____

Account #(s) _____ Map #(s): _____

Address _____

Town _____

State _____ Zip _____