

WEC CO-OP CURRENTS

Vol. 66, No. 2

The newsletter of Washington Electric Cooperative, Inc., East Montpelier, Vermont.

March 2005

YUCCA MOUNTAIN

Co-op Member Tours Construction Site for Nuclear Dump

Tony Klein of East Montpelier woke up early in his hotel room on Sunday, December 5, 2004, knowing that this day would be unique in his life. At 7 a.m., he and approximately 20 companions would board a bus for the 120-mile drive from Las Vegas to Yucca Mountain, a tawny rise in Nevada's high desert where the U.S. Department of Energy (DOE) is constructing an underground repository to store the nation's high-level nuclear waste.

The trip would take them through the historic Nevada Test Site, a Rhode Island-sized patch of desert where between 1951 and 1992 more than 900 nuclear test blasts were conducted, 100 of them above ground and visible sometimes from Las Vegas.

Yucca Mountain, in the southeast portion of the wedge-shaped state, was designated to host the nuclear waste repository in 2002. It was the last site standing after a nationwide search for terrain geologically suitable for storing lethal radioactive waste safely away from humans and their environment. The search briefly lighted in Vermont, where DOE researchers thought the state's granite formations might serve their purpose. Vermont did not long remain



on their radar screen, for scientific reasons (vulnerable underground water supplies) and perhaps public-relations reasons as well. Federal officials encountered near-universal hostility among Vermont citizens, particularly at a 1985 public meeting at Blue Mountain High School in Wells River.

The search eventually narrowed to sites in Texas, Washington and Nevada. In 1987 Congress directed DOE to focus on Yucca Mountain, and in July 2002

President George W. Bush and Congress authorized construction of a storage facility there. However, the project has begun to resemble the perpetual Big Dig in Boston, as the date for its completion grows softer. In 2002 the target date was 2010. More recently Margaret Chu (who resigned as project chief in February) changed the projection to 2012; others have said the time frame of 2015-2017 is more realistic.

Vermont's Tony Klein believes it's

The mouth of the five-mile tunnel leading to what DOE hopes will be underground storage rooms holding radioactive waste for 10,000 years.

questionable whether the Yucca Mountain repository will ever open.

"The people of Nevada don't trust the federal government, after they were lied to for years about the nuclear testing site," said the Washington Electric Co-op member, who represents East Montpelier in the Vermont House of Representatives. (Prior to his election to the House in 2002, Klein was WEC's lobbyist for three years in the Legislature.) "And now Sen. Harry Reid (D-NV) is the Senate minority leader, and he is absolutely opposed."

Meanwhile, construction continues.

"Seventeen billion dollars has been collected through a surcharge on all nuclear power, which was put in place in the 1980s when DOE began the process of looking for a national repository," Klein said. "Basically, we're all paying for it."

(WEC members are probably paying, too, even though the Co-op terminated its contract with Vermont Yankee in 2002

continued on page 2

Inside

Three candidates announce plans to run for WEC Board. Meet Cilley, Douglas and Guiles on page 4.

Outages, and cures for outages. The 2004 Outage Report provides information for improving Co-op service. Page 8.

Fuel buyers groups can help you control heating costs next year. But to take advantage, you should start planning soon. See page 6.

Your voluntary Co-op Community Fund was busy in 2004. See how it contributed, on page 3.



'Who goes there?' Perhaps a fisher! Three WEC members identified our animal track photos from the January issue. Page 2.

Washington Electric Cooperative

East Montpelier, VT 05651

Members Write

In our January issue, we featured a collage of photographs on page one, showing animal tracks imprinted in the snow in a Co-op right-of-way in Barre Town. In the caption, we wrote: "If you can read tracks, write and tell us which animals these were."

We were delighted to hear from three Co-op members! Printed below is a letter from **Steve Hagenbuch** of Middlesex. Also responding were **Nona Estrin** of East Montpelier and **Jim Butler** of West Topsham, who identified the tracks by sending in diagrams of the photo collage rather than letters.

Our thanks to each of these folks. As a reward for their interest, WEC sent Steve, Nona and Jim 60-minute Washington Electric Co-op long-distance calling cards.

Timeless Story Told in Tracks

Editor, Co-op Currents:

I was excited to go to the mailbox recently and pull out the January 2005 edition of the Co-op Currents, complete with photos of wildlife tracks on the front cover.

Winter is a great time to

get out and find clues left behind by our furred and feathered friends. These clues, which can take the form of tracks, signs of feeding, scat (animal droppings), etc., help us to get a closer look into the world of wildlife that otherwise goes unseen to our eyes. Based on the photos in the newsletter, power line rights-of-way can provide a great canvas on which to discover and interpret these clues.

Through the tracks presented in the photos we can re-live one possible story that had played out in real life:

The early successional habitat, made up of grasses, shrubs and young trees, that is often found in power line rights-of-way, provides food and cover important to mammals such as



Co-op Currents welcomes letters to the editor that address any aspect of the Co-op's policies and operations, or any matters related to electricity. Readers can write to Co-op Currents, P.O. Box 8, East Montpelier, VT 05651. Letters to the editor will not be published in the Annual Meeting (April) issue.

snowshoe hare (left photo) and red squirrel (bottom photo). Both of these animals leave behind the typical "hopping" or "galloping" track pattern, as can be seen in the photos.

For predators such as coyote and fisher, squirrels and hares are an important food source. The top photo shows the four-toed prints of a coyote that may well have been in search of a meal. In the photo to the right, we see what could either be tracks made by a running coyote, or perhaps the loping movements of a fisher. In either case, and with a bit of imagination, the timeless display of predator-prey

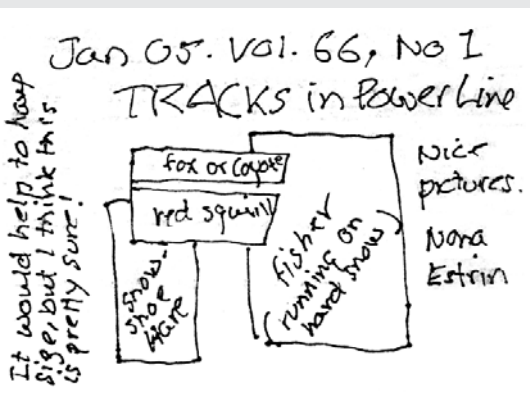
relationships can easily be seen taking place in this Co-op corridor.

(Steve Hagenbuch is the Director of the Green Mountain Audubon Center in Huntington and lives in Middlesex.)

Jim Butler sent back the photo page with a note saying "As I see it!" and identified the tracks as follows: top photo, fox; center photo, squirrel; left photo, rabbit; right photo, fisher. Mostly, our respondents agreed!

Correction

In the January 2005 issue of Co-op Currents we mistakenly printed the wrong e-mail address for the Vermont Green Building Network. The correct address is www.vgbn.org. This site provides updates, information and resources for green building in Vermont.



From Nona Estrin

Co-op Currents

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Board of Directors			
President	BARRY BERNSTEIN	1237 Bliss Road, Marshfield, Vt. 05658 Bbearvt@aol.com	456-8843
Vice President	ROGER FOX	2067 Bayley-Hazen Rd., East Hardwick, Vt. 05836-9873 rfox@pivot.net	563-2321
Treasurer	DONALD DOUGLAS	21 Douglas Rd., East Orange, Vt. 05086 Runasimi2@aol.com	439-5364
	KIMBERLY CHENEY	143 S. Bear Swamp Rd., Middlesex, Vt. 05602 kcheney@cbs-law.com	223-3181
	WENDELL CILLEY	5 Warsley Road, West Topsham, Vt. 05086 cilley@tops-tele.com	439-6138
	ROY FOLSOM	2603 US Rt. 2, Cabot, Vt. 05647 RoyGrnsy@aol.com	426-3579
	CHARLES HAAS	4733 South Road, Bradford, Vt. 05033 bud@tops-tele.com	439-5397
	MARION MILNE	1705 E. Orange Rd., W. Topsham, Vt. 05086 milne@tops-tele.com	439-5404
	RICHARD RUBIN	3496 East Hill Rd., Plainfield, Vt. 05667 rrubin@sover.net	454-8542

AVRAM PATT
General Manager
avram@washingtonelectric.coop

WILL LINDNER
Editor
Willind@aol.com

TIM NEWCOMB
Layout

Editorial Committee

Avram Patt Donald Douglas Wendell Cilley Will Lindner

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.

Yucca Mountain

continued from page 1

and has no nuclear power in its portfolio. The Co-op buys a small amount of power on the electricity spot market, a mix that almost certainly includes nuclear-generated energy.)

So far, Klein said, \$8 billion of the \$17 billion has been spent.

"If the project is completed and opened," he said, "it will have a price tag of \$60 billion, which would make it, economically, the largest, single construction project ever."

Cold War ghosts

Klein was approached about traveling to Yucca Mountain late in 2004. Entergy Nuclear, the company that owns Vermont Yankee, coordinated the trip, but Klein never ascertained who paid for it. (He presumes it was an industry trade group, but discourages any notion that the trip was a "junket," explaining that there wasn't much time in the 36 hours spent in Nevada for anything but the expedition to Yucca

Mountain.)

"There was very little politics involved," said Klein. "It was about technical issues, and I would say it was an effort to get people familiar with dry cask storage, which will be an issue before the Legislature because Vermont Yankee is running out of room [for nuclear waste] in its storage pool. Entergy will have to come to the Legislature for permission to move to dry cask storage."

Klein believes he was invited because of his interest in energy issues. In 2003 he was the primary House sponsor for a bill eventually enacted as Act 69. It included a grant program to

assist in the installation of small-scale renewable energy systems and promote development of Vermont's renewable-energy industry. (He doubts the program will be re-funded this year.)

The travelers arrived in Las Vegas at 6:30 p.m. on December 4, had dinner and went to their hotel. At 7:00 the next morning, they boarded a bus and set out across the desert under clear blue skies



Workers construct the tunnel and rail system penetrating Yucca Mountain in Nevada.

continued on page 5

The Good Your Money Does

Yearly Report on WEC Community Fund

It's not a comforting thought, but it is a fact: Vermont can be a dangerous place for senior citizens in the wintertime. Bitter cold weather, rural isolation, and the specter of power lines brought down by snowstorms and high winds present the disturbing image of elderly people struggling to survive an extended power outage, perhaps without heat or a way to cook their meals.

Fortunately, a group of nonprofit social-service agencies in our area foresaw this possibility and acted to protect some 600 senior citizens in Washington, Orange and Lamoille counties. Working together, the Central Vermont Community Action Council (CVCAC), the Central Vermont Council on Aging (CVCOA) and the Central Vermont Chapter of the Red Cross coordinated an effort to prepare and distribute "blizzard bags" this winter. Each contained a two-day supply of food, a heavy-duty flashlight and batteries, and hand warmers that are activated by crinkling them up.

The project was a perfect match for WEC's two-year-old Community Fund. In December the Co-op made a donation



Helping prepare "blizzard bags" for rural senior citizens, WEC General Manager Avram Patt (right, rear) and GMP Vice President Walter Oakes (second from left) pose with volunteers from other organizations.

for the blizzard bags, joining approximately 40 other businesses and organizations that responded to the agencies' request.

The project came together in the nick of time. Volunteers gathered in Barre's historic Labor Hall to assemble the

boxes in February, and then hurriedly delivered them to senior citizens just before the winter's first severe weather hit the area.

"There are seniors who are vulnerable during winter storms, and especially if there should be power

outages," said Judith Chalmer, development manager for the Community Action Council. "Everyone would love to keep senior citizens who wish to live independently living safely in their homes, but yet not be in danger because they can't be reached in bad weather."

Many of these elderly Vermonters rely on the Meals on Wheels program.

"But the drivers for that program often are seniors, too," Chalmer explained. "They don't necessarily get out on the worst roads, on the worst days."

The blizzard-bags project was a true community effort. It pulled together not only the three coordinating agencies, but the Vermont Food Bank, Meals on Wheels, local libraries and other organizations. Chalmer said that hospitals and medical centers, health insurance providers, and electric utilities were particularly forthcoming with donations. WEC General Manager Avram Patt and Green Mountain Power Corp. Vice President Walter Oakes put in time at the Labor Hall along with AmeriCorps VISTA volunteers, students from the Websterville Baptist School, Corrections Department work crews and others, preparing the blizzard bags.

"We approached Washington Electric Co-op because WEC has been a good friend to CVCAC, with a long relationship with our organization," said Chalmer. "We know the Co-op's philosophy includes a social conscience and participation in the community. It's something WEC does."

2004 Contribution Summary, WEC Community Fund

CONTRIBUTION RECIPIENT	LOCATION	NOTES
Central Vt Adult Basic Education	Central VT	adult literacy programs
Barre Homecoming Celebration	Barre area	community event
Spaulding High School Proj Grad	Barre area	substance-free graduation celebration
Vermont Historical Society	statewide	Vermont History Expo, Tunbridge
Goddard College	Plainfield	assist library with purchase & public showing of environmental video
U-32 Project Graduation	Central VT	substance-free graduation celebration
Turning Point Club, Central VT	Barre area	meeting place & support for people in recovery from addiction
Vermont Arts Institute	NE Kingdom	scholarship for low-income students
Association Of Vermont Recyclers	statewide	youth environmental summit
CV Habitat For Humanity	Central VT	support for volunteer-built home in Barre
Peacham Playground Committee	Peacham	volunteer & community-funded project, facilities for young children
Williamstown Parade Committee	Williamstown	community event
Central Vermont Council On Aging	Central VT	support for hike-a-thon
Jaquith Public Library	Marshfield	summer community concert series at Old Schoolhouse Common
Tunbridge Public Library	Tunbridge	support of programs
Twin Valley Seniors, Inc	Marshfield	Six-town senior center & meals program
People's Health & Wellness Clinic	Central VT	health services for the uninsured & under-insured
Plainfield Historical Society	Plainfield	ad in fundraising calendar
First Night - ORAC	Central Vt	regional News Years Eve event
Onion River Arts Council	Central VT	support of programs
Friends Of The Winooski River	Worcester	community project, assist town's last dairy farm with manure containment
Northeast Slopes, Inc	E. Corinth	non-profit rec. facility capital improvement campaign
WARMTH Program	Central VT	emergency heating assistance
Cabot Coalition	Cabot	ad in calendar for local substance abuse prevention group
North Branch Nature Ctr, VINS	Montpelier	community lecture series on nature subjects
CVCAC-CVCOA-CV Red Cross	Central VT	"blizzard bags," emerg. supplies for elderly to prepare for outages
Green Mountain Film Festival	Montpelier area	local event with statewide audience
Studio Place Arts	Barre area	Five-week "Plugged In" exhibit of electronically dependent art

Total: \$9,280.00

continued on page 7

Contributions up in '04

It's something WEC has been able to do better since the Board of Directors created the Community Fund in 2002, by inviting members to voluntarily donate their capital credit refunds to the cause.

Member contributions to the Community Fund increased again in 2004, reaching \$17,455.34.

In the fall of 2003 (WEC's capital credit refunds are distributed in autumn), Co-op members contributed \$14,803.64 to the Community Fund. It was those 2003 donations that financed Community Fund expenditures in 2004, and are the subject of this report.

Out of that \$14,803.64, a total of \$9,280 went out as contributions to 28 local programs. Approximately \$5,000 was spent on public information and promotional efforts to make the community aware of WEC's new program. Those promotional expenses shouldn't need to be repeated, which ensures that in 2005 and future years all of the money collected through voluntary

Three Candidates for WEC's Board of Directors

Three member/owners of Washington Electric Cooperative have come forward as candidates for the Co-op's Board of Directors in 2005. If elected, each will serve for three years, their terms ending in 2008.

Every year three seats on WEC's nine-member Board expire, providing the membership an opportunity to elect one-third of the Board that makes leadership decisions for the member-owned cooperative, and oversees management and staff. This year the directors whose terms will expire at the time of the Annual Membership Meeting (they remain Board members until that event) are **Wendell Cilley** of West Topsham, **Donald Douglas** of East Orange, and **Charles Haas** of

Bradford. Cilley is offering his services for another term, as is Douglas (who is also the Co-op's treasurer, which is a Board position). Haas has decided not to run again, having served two separate stints on the WEC Board. Haas was elected to the Board in 1992 and again in 1995, and served as treasurer for two years. Haas left the Board in 1998, but was reappointed to temporarily fill a vacancy after a director resigned in 2002. He ran successfully for re-election that year, and is now finishing his third full term of service to WEC's members.

The third candidate confirmed by the 2005 Committee on Candidates is **Timothy Guiles** of Williamstown. Guiles, a Co-op member for six years, ran for the Board for the first time in 2004.

The election of Directors is performed by ballots sent to each Washington Electric Cooperative member by mail in the weeks prior to the Annual Meeting. **When your ballot arrives, check the accompanying materials to determine when the deadline is for posting your votes by mail. Members who attend the Annual Meeting can vote there if they wish, rather than by mail.** The meeting, which includes dinner, will be held at the Montpelier Elks Club on Tuesday evening, May 3. (A schedule of events for the Annual Meeting, and a coupon for the dinner, will be printed in the next issue of *Co-op Currents*.)

Voters can write in the names of other Co-op members who are not official candidates on their ballot, if they

choose. Candidates run at-large because Washington Electric Cooperative is not divided into districts. The three candidates who receive the most votes are the winners.

Printed below are brief biographical sketches submitted by the candidates, which contain information on each person's background and involvement with the Cooperative or other avenues of community service. The April "Annual Meeting" issue of *Co-op Currents* will feature their responses to questions about issues related to Board service. It will provide readers a better sense of the interests, viewpoints and experience of the three candidates.

Report Of The 2005 Committee On Candidates

The 2005 Committee on Candidates convened a teleconference on Tuesday, March 8, at 7:00 p.m., to review the petitions and qualifications of those members who have submitted their names as candidates for the Board of Directors. This year, three (3) members of the Washington Electric Cooperative, Inc. submitted their names as candidates for the three (3) Board positions to be filled. The Committee on Candidates hereby affirms:

- that each candidate submitted a valid petition in accordance with Article III, Section 3A of the Bylaws;
- that each has signed a statement of affirmation indicating that they:
 1. have been a member of the Co-op in good standing for at least six months;
 2. are residents of Vermont;
 3. are not employees of the Cooperative;
 4. do not have a conflict of interest as defined in Article III, Section 2 of the bylaws; and
- 5. have received and understand the responsibilities and time commitments required of a director.

Therefore, the Committee determines all of the candidates to be qualified for the position of director in accordance with the Cooperative's Bylaws, and hereby presents the following official listing of candidates for the Washington Electric Cooperative 2005 election of

Directors:

Wendell Cilley
Donald Douglas
Timothy Guiles

2005 Committee on Candidates:

*Carl C. Demrow
Ann Dolan
Stuart Granoff
John Hoffman
*Benjamin Naylor
*Sarah O'Brien
Donna Sprake
Polly Stryker
*Yvette Tomlinson

*did not participate in the teleconference

Wendell Cilley

Residence:

I have lived in West Topsham for the past 23 years. I was born at the former Barre City Hospital and grew up in Orange, Corinth and Topsham, attending schools in Cookeville and Barre. My mailing address is 5 Warsley Road, West Topsham, VT 05086, and I can be reached by phone at 439-6138.



been a Washington Electric Cooperative member for 23 years and have lived most of my life in member households. During the 12 years that I have been on the WEC Board, I have seen positive changes in how WEC delivers services to members. I am seeking another term as a director because I believe there is still work to do to provide economical and reliable services while improving the quality of life for the WEC community.

Donald Douglas

Residence: I live in East Orange with my wife, Fran. Our youngest child, Jon, is a junior at UVM. Katie is a senior at Indiana University and Nate graduated from UVM and is living in Washington, DC. We bought our home in East Orange in 1981. I can be reached by phone at 439-5364 or by mail: 21 Douglas Rd., East Orange, VT 05086, or by e-mail at runasimi2@aol.com. I would be happy to talk with anyone about your Co-op.

Education/profession: I am employed by the US Postal Service. I have been a rural carrier for the past 21

years. Before joining the Postal Service I worked in a wide variety of jobs, from electron microscope technician to high school teacher, with farmer, logger, and special education aide also included. I have a BA from Washington University and an MA from the University of Texas.



Community Service/WEC: I have been an active member of my community since moving here in 1981. I was a volunteer fireman for 14 years. I was the vice-president of the Orange County Court Diversion Board. I have been a high school soccer referee. I was a union steward for the Rural Carriers' Association, and I worked with the Central Vermont Refugee Assistance to provide transportation and temporary housing.

I have been on the Board at WEC since 1999, and have served as treasurer for the past five years. I

have served on the Board's Coventry Committee, and am very excited about our new generating facility there. In addition to this project I hope we can continue to lead Vermont and the nation on the path toward renewable energy. While I am interested in renewable energy, I am also focused on our primary mission at Washington Electric Co-op, which is providing the members with reliable, affordable electricity, and I would appreciate the opportunity to represent you on the board.

Timothy Guiles

Residence: I live off Baptist Street in Williamstown in a partly solar-powered home. I

moved to Vermont in 1992. I can be reached by phone at 279-2168, and by e-mail at timguiles@mac.com.

Education/Profession: After receiving two engineering degrees from Dartmouth College in 1981, I worked




as an R&D software engineer for eight years, then entered the environmental engineering Ph.D. program at Johns Hopkins University to study sustainability issues. I currently make my living as a music teacher and

piano accompanist. I play for Barre Town Elementary School, the Rumney School, People's Academy, many regional festivals, and for singing groups like the Randolph Singers, the Mad River Chorale, and

the Vermont Symphony Chorus.

Community Service/WEC: I have been a Hospice volunteer for the last 15 years. I have been trained and, previously, have spent many years helping

people do their taxes. As the Williamstown librarian, I was active in Adult Basic Education literacy tutoring, and I set up the first Williamstown Playgroups in coordination with the regional Success-by-Six efforts. 

Yucca Mountain

continued from page 2

and cool temperatures. When they reached the entry point for the federal property that includes the former weapons-testing area as well as Yucca Mountain, guards came onboard to check IDs. The ride continued, across lands that had known the scorch and destructive might of nuclear explosions.

"What was going through my head was that this was where they tested those weapons," said Klein, who, months later, is still moved by the experience. "You could see these relics of old tests... shacks, and overturned trailers."

Then, he remembers, they came to "a huge tower. I mean huge! 1,527 feet high. Taller than the Empire State Building. More than a quarter of a mile high. Right there in the desert!"

What was the significance of this tower, which Klein described as built like an Erector Set?

"It was the exact height at which the bomb at Hiroshima was detonated," he said. Its purpose was not clear, but Klein learned that the bomb, exploding at that altitude after it was dropped from the Enola Gay, created intense downward pressure against the earth, a factor in the extraordinary, destructive nuclear winds.

"You know, it's pretty imposing, being there. It puts all that stuff in perspective."

Yucca, if anywhere

When they reached the construction site for the nuclear waste repository, they saw an arched entryway, 24 feet in diameter, for a tunnel that penetrated the mountain on a gradual, 2-percent incline. It reminded Tony Klein not so much of a coal mine as a metropolitan subway. The group ventured partway down the shaft.

"They've built a tunnel five miles long," said Klein. "Casks [containing nuclear waste] would go in by rail."

As the railcars reached the depths of the tunnel the casks would be offloaded into adjacent storage rooms. The rooms are to be ventilated, to allow the heat from the dry casks to escape. The

design would allow the air to pass through the rooms naturally, with no need for mechanical assistance – and no hope it, either, since the equipment would need to run for 10,000 years. That's how long the waste will remain dangerously radioactive. (For perspective, consider "King Tut," the

Egyptian pharaoh whose mummified remains have come to symbolize unfathomable antiquity; he died and was entombed a mere 3,348 years ago.)

"When one of these rooms is filled up," Klein continued, "they [would] seal it off, never to go back again. Then they [would] begin filling the next room."

The Nevada site was selected on the theory that they *could* seal off these rooms. Klein found the evidence persuasive – first, because of dry cask technology itself.

"The dry cask is a stainless steel container 19 feet long and six feet in diameter. When they're loaded with spent fuel rods, and then sealed and welded shut, they weigh 190 tons."

(The weight and volume of the containers is misleading, said Klein,

who claims that all of the nuclear waste that has been created commercially in the past half-century would fit in the dimensions of a football field 15 feet deep. That is, if it could be consolidated, which it can't, safely. "The volume of waste is not great," he said. "It's the packaging.")

Klein was persuaded that environmental conditions at Yucca Mountain also make it a relatively safe place to store radioactive waste.

"The enemy of dry cask storage is water," he said. "The tunnel is more than 1,000 feet above the water table." The desert climate is arid (the Yucca Mountain Project website says precipitation averages less than 7.5 inches per year), and the geology seems stable.

"This was one of the most interesting parts of the trip for me," said Klein.

Outside the tunnel were rock formations that reminded him of the slag heaps surrounding granite quarries in Vermont. Rocks were piled on each other in seemingly precarious positions, looking like they would topple over at



A nuclear blast, visible from Las Vegas (photo circa 1960), perhaps illustrates why Nevadans don't want to live near a nuclear waste dump.

They came to a tower taller than the Empire State Building, right there in the desert.

any minute. And yet, if you moved one of the rocks you could see that the undersides were an entirely different color from the exposed sides, a phenomenon called desert varnish.

"The rocks haven't moved in 200,000 years," said Klein, "which is proof of the area's seismic inactivity."

His conclusion: "What I learned at Yucca Mountain led me to believe that scientifically, Yucca is good. If you can't store it safely there, you can't store it anywhere."


Naturally, some disagree. Arjun Makhijani, an engineer at the Institute for Energy and Environmental Research in Maryland, told *Rutland Herald* reporter Susan Smallheer last May that the porous volcanic rock at Yucca Mountain was a poor medium for containing radiation. He also expressed concerns about groundwater, and livestock that

graze as close as 12 miles away.

"We need to marry engineered barriers [casks] to [appropriate] rock types," Makhijani said.

Makhijani's conclusion appears to be the dissenting view, scientifically, but since Klein's visit a three-judge panel of the U.S. Court of Appeals has ruled that 10,000 years is not sufficient to protect the public (whatever "public" may exist, say, 8,000 years from now) from radiation leaks, and that the repository must be designed to contain its lethal inventory for a far longer period of time.

Nevada officials were thrilled. The state's nuclear project director joyously told newspapers, "We believe the project is dead."

If so, Yucca Mountain will become a vast repository not of radioactive nuclear waste, but for billions of frittered taxpayer dollars. 

'If You Can't Deal With the Waste...'

If there's a safe place anywhere in the U.S. to store high-level nuclear waste, Tony Klein believes the Department of Energy has found it at Yucca Mountain in Nevada. (See "Yucca Mountain," page one).

Nevertheless, the East Montpelier state representative, Washington Electric Co-op member and former WEC lobbyist returned to Vermont on December 6, 2004, as uneasy about nuclear-generated electricity as he was when he



Rep. Tony Klein, D-East Montpelier

departed on the two-day journey to the mountain. If the repository ever opens – which is questionable in itself – it would accommodate 40,000 metric tons of nuclear waste, Klein said, adding, "That's equivalent to what we produced in this country up to 1998. All the space is spoken for before the place even opens up."

The country has only been adding to its stockpile since then. And the Bush Administration favors further incentives for the nuclear power industry.

Meanwhile, generating plants are running out of room for storing their radioactive waste. According to the *San Diego Tribune* (February 15), "(T)ens of thousands of tons of spent nuclear fuel, high-level radioactive waste and excess plutonium are being temporarily stored at 131 sites in 39 states."


That includes Vermont Yankee in Vernon. There, spent fuel rods are kept in an indoor pool, which will run out of room in 2008 (or earlier if a 20-percent production upgrade for the plant is approved). The next obvious move would be to begin storing the waste temporarily on site, in dry casks, which is already being done elsewhere.

Klein worries about the meaning of "temporarily."

"You've got to be thinking, at a minimum, 100 years," he says. "That doesn't sound like much compared to 10,000 years at Yucca Mountain, but the [environmental] factors in Vermont are not the factors in Nevada. The site in Vermont is less than a football field from the Connecticut River."

Terrorism is a concern, everywhere, but so is human error.

"I know the people who work at those plants are well trained. I have a lot of respect for them," says Klein. "But they are humans, and humans make errors. And when there's an error with this stuff it's not a simple 'oops.' An error with this stuff could absolutely destroy the way we exist."

"Here's the issue for me," he says. "You always like to balance out rewards and liabilities. Philosophically, if you can't deal with the waste, you can't continue to produce it. I think we can supply our energy needs through conservation, efficiency, renewables and other means, without the threat presented by nuclear waste we don't know what to do with." 

As Winter Wanes, Plan Now To Save On Fuel Purchases Next Year

By Bill Powell
Director of Products & Services

Few people who buy fuel oil to heat their homes have gotten through this winter spending less on heating fuel than in prior years. For some, the increase in fuel costs, compared to the winter of 2003–2004, was 50 percent or more.

These price increases have a number of causes, some of them being the rhythms of the global oil market, the Iraq war, the rise of the Chinese and Indian fuel markets, and speculator activity. Whatever the causes, what our Co-op members faced was a fairly significant price increase for what, in Vermont, is a necessity of life.

In these pages WEC frequently recommends that members consider improvements to their heating mechanisms and to their houses, to reduce air infiltration and increase the heating efficiency of their homes. These improvements not only lower heating costs, but also increase comfort and boost the resale value of the home.

(Further information can be found on WEC's website; see "Home Comfort" in the Energy Efficiency section.)

However, most of us still need to purchase heating fuel or propane. And while this winter is in its final weeks, members should use the next

couple of months to begin planning for their heating needs next year.

WEC has an interest in identifying fuel-buying options that may provide advantages for our members. We'll talk now about two in particular: pricing plans and buying groups.

Pricing plans

Most fuel dealers offer different ways to plan and pay for how much fuel they will purchase. Typically these are called "pre-buy" or "budget" plans.

Under a pre-buy plan, you need to estimate how much fuel you'll need for a heating season, then find out what a dealer would charge if you purchased that volume a few months ahead of delivery. Typically, this is where the lowest price is obtained. However, you'll need to come up with a whole season's cost in one payment.

Budget plans also are based on a pre-determined amount of fuel, but in this case the price may be slightly higher per gallon. The big difference is that you won't have to come up with all the cash in one payment. Rather, the

total cost would be averaged over 10 or 11 monthly payments. Budgeting provides the benefit of a predictable cost for your fuel. However, you pay for that security by paying the same in fuel bills in warmer months, too, when normally the bill would go down.

The third payment option is "will call": paying the market price for fuel when it is delivered. This can result in widely varying changes in the per-gallon price, especially during the coldest months. To see how fuel prices have tracked over time, one useful source is:

http://www.state.vt.us/psd/Menu/Vermont_Fuel_Price_Report.htm

Buyers groups

Buyers groups have been around for several years in central Vermont. Think of buyers groups as a network of property owners and property managers who combine their individual fuel needs and go to fuel dealers as a single, large account. Dealers will then often agree to sell fuel at a reduced per-gallon charge, because the company gets the benefit of an increased, stable and prepaid volume of sales.

Typically, buyers-group participants are charged a membership fee, which is based on their planned purchase volume. (For example, 5 cents per gallon for 500 gallons equals a membership fee of \$25).

Here are some local buyers groups in the general area served by Washington Electric Cooperative. You may find other groups, too, sometimes organized through workplace affiliations.

The Energy Co-op of Vermont (<http://www.vcec.org/prices0405.html>). This Chittenden County-based fuel co-op with 700 members also serves a limited area (Montpelier, East Montpelier, Middlesex) of central Vermont.

The Ruth Clark Buying Group. Ruth Clark is a Williamstown realtor who has operated a fuel-buying group for several years, serving households in central Vermont. Last winter the fuel oil supplier for Ruth's buying group was Agway (now owned by Suburban Propane).

The Vermont Fuel Buyers Association. Mike McGlynn is a Calais resident who operates the Vermont Fuel Buyers Association. Like the Clark group, the membership fee is based on the volume of fuel that members plan to purchase. Irving Oil has been the supplier for the Vermont Fuel Buyers Association.



SERG Energy Club. The Sustainable Energy Resource Group (SERG) has run an "Energy Club" in the Upper Valley for two years, coordinated by Bob Walker. One function of the Club is securing reduced prices for oil and propane for its members. Membership is open to anyone in the area served by Bradford Oil/Pratt's Propane (both based in Bradford).

These groups typically begin accepting new members in July and complete their fuel contracts by mid-August, so interested people should plan to inquire and commit within that time frame. You can contact these groups directly, either at the web

address above (for the Energy Co-op of Vermont) or through the contact information below for the Clark, SERG and Vermont Fuel Buyers groups.

WEC does not endorse any particular buyers group or fuel dealer. However, if you have questions about which fuels to buy or pricing options to choose, please contact the Co-op (802-223-5245), or at our website:

www.washingtonelectric.coop; see "Contact Us."

Ruth Clark (433-6216)
Ruth Clark Buyers Group
Williamstown, VT

Mike McGlynn (456-7479)
Vermont Fuel Buyers Association
East Calais, VT

Bob Walker (802-785-4126)
SERG Energy Club
Robert.J.Walker@valley.net

Right-Of-Way Reclearing Projects Scheduled

Spring and Summer of 2005

Affected Members with 'Special Trees' Should Call the Co-op

The Co-op will continue working to improve service reliability by reclearing power line rights-of-way in the areas described below. Right-of-way reclearing normally involves removing trees and pruning vegetation for 15 feet on either side of a single-phase distribution line. Except where noted, all of these projects involve single-phase lines, those carried by poles without crossbars. Reclearing projects often involve a tap. That's where a single-phase line takes power from another line.

Throughout the year, postcards are mailed to members notifying them that right-of-way maintenance is to take place. Also, WEC's automated message-delivery system will place a phone call (if a phone number is on file) to all households affected by such maintenance projects, up to two or three weeks before work on the property is to begin. Calls will be placed in the evening when most members are likely to be home. If no one answers, Co-op staff will attempt to reach that member during the day.

Because the evening calls are automated, they cannot hold the line if, for example, a child answers. If you believe you may have received a call from WEC, please call during office hours to check. If you have a tele-zapper you will not receive our automated calls successfully, so please notify us at WEC so we can delete you from our calling list. If you are notified that a portion of your property is to be recleared and you especially hope to save any particular trees that are within the right-of-way, call the Co-op. The Co-op's Forester and Right-of-Way Management Coordinator, Mike Myers, will be happy to talk with you about any problems.

WEC's Herbicide Policy: It has long been the Cooperative'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. The Co-op does occasionally make limited use of herbicides to control weed growth within our own substations.

- Brookfield** lines along Ferris, Chelsea, North and East Hill Roads
- Calais** tap to Neil Carbo (CS 200-B) Chapin Road
- Calais** short tap along County Road to Mason Singer (CS 144-H)
- Chelsea/Washington** tap to Robert Corvi (Was 126) Hill Farm Road
- East Montpelier/Calais** three phase line from East Montpelier sub to Calais Elementary School - Kelton and Guyette Roads
- East Montpelier** Sander's Circle off Horn of the Moon Road
- Northfield** three phase line from Bull Run to Route 12A including Messier Road
- Plainfield** line along Middle and Upper Roads to Michael Brosky (PL 10) and Robert Maclaren (PL12)
- Roxbury** tap to Route 12 near Steele Hill Road
- Topsham** Mt Knox sub towards Topsham/Groton town line on Route 302
- Topsham/Corinth** three phase line from Mt. Knox sub to Corinth Fairgrounds Route 302, Cross Road and Route 25
- Walden** Foster Sawmill, Summerhill and Stevens Hill Roads
- Walden** cross lots line near Hines Place Trail and Old Duke Road
- Walden** Rock Road
- Williamstown** short tap to Marsha Martin (Wil 162) Route 14
- Williamstown/Washington** two phase line along McCarthy and Lambert Road

WEC Community Fund

continued from page 3

contributions of capital credit refunds will be available for Community Fund donations.

An unspent balance of \$523 was carried forward for this year, and added to contributions of capital credits made last fall. We are happy to report that member contributions increased again in 2004, reaching \$17,455.34.

Board policy calls for *Co-op Currents* to publish an annual listing of the organizations and programs receiving Community Fund grants during the previous year. (Donations usually run from \$100 to \$500.) The summary for 2004 appears on page 3.

Fields and streams

"The donations we made in 2004 were for a mix of new requests and repeated requests from 2003," said General Manager Patt (who fields the requests and passes them on, with

"The activities we assisted were a cross-section of the kind of community-building, people-centered things that are going on all over our service territory."

recommendations, to WEC's Members & Markets Committee for decisions).

"The type of activities included social services and assistance programs, like the blizzard bags; recreational programs such as local playground committees; arts programs; environmental and educational activities... really, a large cross-section of the kind of community-building, people-centered things that are going on in towns and villages all over our service territory."

There are guidelines for the Community Fund. Donations must go to organizations that are "financially viable" and "broadly supported in the communities they serve." They should either be very local (ball fields, libraries, senior citizen groups) or widely available

and beneficial to people in central Vermont (Adult Basic Education, the People's Health & Wellness Clinic, First Night Montpelier). The Fund does not give to religious or political organizations.


"One of the efforts we contributed to in 2004 was put together by Friends of the Winooski River, to assist a farmer who owns the last remaining dairy farm in Worcester," said Patt. "He needed to install a manure pit to protect the river from agricultural pollution, and although there was some federal money available it was still going to be very costly for him.

"This project attracted a lot of attention. It was about the survivability of a Vermont dairy farm, and about

environmental protection, and about helping a good person who needed a hand in a crisis. It was a kind of grassroots project which a lot of people got involved in, and it was successful."

Toward the end of 2004 WEC saw another important need and made a larger contribution (\$1,000) from the Community Fund.

"I recommended an unsolicited donation to the WARMTH program," said Patt. "We had the money in the Fund budget, and people were facing dramatic heating-fuel price increases. WARMTH is an ongoing project that addresses that very need and is important to the Co-op, as well as to lots of people in the communities we serve."

The money for all these causes was available because so many WEC members chose to forego their capital credit refunds and contribute them for good works, instead. Co-op members will have an opportunity to do the same thing again next fall. 

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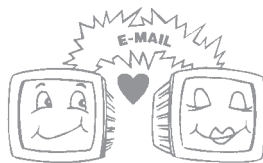
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Outage Report Looks Back At 2004

Report Identifies Problems and Solutions for Corinth, South Walden

If you live in North Tunbridge you may have had an excellent year in 2004 – in terms of avoiding power outages. A yardstick for measuring electric reliability is “consumer-hours out [without power],” and in that regard Circuit No. 2 out of WEC’s North Tunbridge substation was the best on the entire 1,260-mile system.

It was not unique. In many statistical respects, Washington Electric’s 2004 System Reliability Report, filed recently with the state, revealed last year to have been a good one for the Co-op.

But not for everyone. If you’re at the southeastern reaches of Circuit No. 2 out of WEC’s Mt. Knox substation – primarily, in parts of Corinth – 2004 probably wasn’t so good. There, the report shows, WEC suffered an increase in service problems.

“It was the least reliable circuit out of our eight Co-op substations,” said Operations Director Dan Weston, who analyzes the data and compiles the annual report that is required of all Vermont utilities by the state. (Mt. Knox’s Circuit No. 2 serves about 1,230 Co-op members.)

“There were three main causes of outages there,” said Weston. “First, tree-related outages were up 33 percent from 2003. Second, failures of the fuse mechanisms that we call ‘cutouts,’ manufactured by the A.B. Chance Company. The failure rate was up 30 percent on that Mt. Knox circuit.”

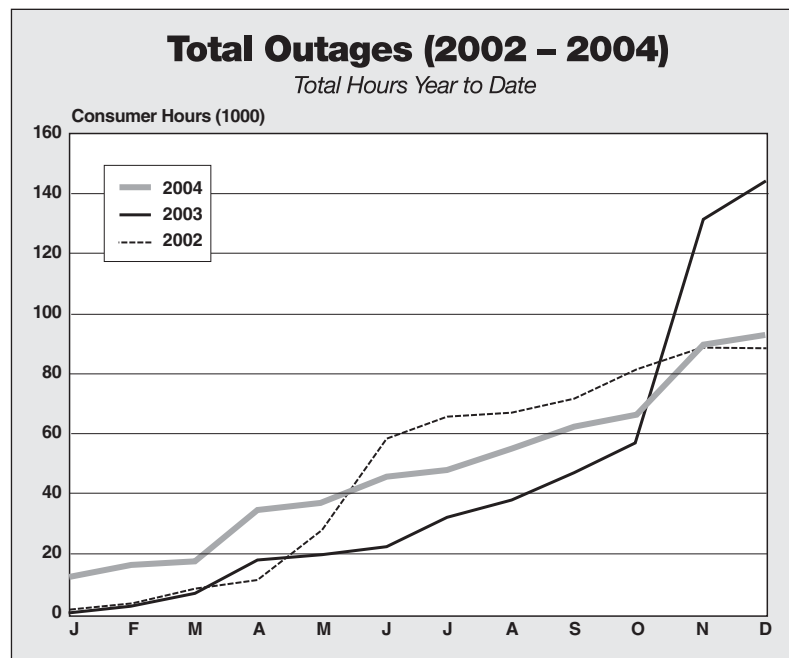
The third leading cause of down-time on that circuit was planned outages – when line workers shut down a portion of the system to make repairs. In fact, company-initiated outages were the

third-leading cause of outages on WEC’s entire system – and the primary reason for them was preventive: replacing the A.B. Chance cutouts before they could fail.

Planned outages for Mt. Knox Circuit No. 2 were up by 25 percent. Total outages there, from all causes, increased by 43 percent from 2003.

“The reliability of the Mt. Knox Circuit No. 2 has declined,” Weston conceded,

beginning with Circuit No. 2,” said Weston. (Feeders are the primary power lines that carry electricity from a substation, while taps are the lines that branch off to serve groups of members in a certain area.) “The number of outages there will increase for a while, because we’ll have to shut down the power to make the changes. But as we proceed, outage durations and numbers of members affected will decline.”



Outage times down by 35 percent!

The 2004 System Reliability Report also yielded encouraging news. The report tallies both the frequency of outages and the average duration of outages, and keeps track of all causes. It compares the results to three- and five-year averages.

“In 2004 our outage frequency was slightly less than the five-year average,” Weston reported, “but the duration of outages was nearly 35 percent less. We’ve been making technological improvements that are paying off.

Outages are affecting smaller numbers of people, and we’re able to locate faults and repair them more quickly.

“We also have better office-based systems for entering information when people call in during storms to report that they’ve lost power, so we can coordinate our response more efficiently in the field.”

Mother Nature, however, is the biggest factor in the company’s track record every year, despite investments in technology and right-of-way maintenance. In the 2004 outage graphs you can see her profile in November.

“We experienced severe late-fall,

torrential rains, accompanied by extremely strong winds,” Weston remembered. “Those outages – in the 11th month of the year – accounted for approximately 33 percent of the entire year’s consumer-hours out!”

The total number of consumer-hours out – outage durations multiplied by the number of members affected – was 92,943 in 2004, less than the five-year average of 120,888. There were 855 separate outage incidents, which was more than the total for 2003 (783 outage incidents) but less than the three-year average (923).

Trees, always the main culprit for rural utilities, were the leading cause, responsible for 135 outages and 16,279 consumer hours out.

A problem, and a solution in the northeast

While Circuit No. 2 out of the Mt. Knox substation was the worst-performing circuit on WEC’s system, people served by WEC’s South Walden substation also experienced problems.

But there is a silver lining to that cloud. In fact, there are two silver linings. First is that WEC built and energized a new substation at South Walden (it came on line in the fall), and also made system improvements during construction.

Perhaps even more significantly, the Co-op worked with Green Mountain Power (GMP) and the Hardwick and Morrisville municipal electric utilities to make improvements to the transmission system that delivers power to WEC’s South Walden sub.

How important is that?

“Right up until the November rainstorms, what we call ‘power-supplier faults,’ which are outages on the transmission lines owned and operated by Green Mountain Power, were the leading contributor to consumer-hours out on our entire system,” Weston explained. “We don’t own or control those transmission lines. But when they go out, our entire substation goes down, and everyone connected to it.”

It’s rare in rural Vermont for anything to outrank storm damage as a cause of power outages. Therefore, the prominence of power-supplier outages from January through October reveals the startling extent of the problem.

But there has finally been a breakthrough for this problem that has affected Co-op members for years. WEC and GMP split the cost for a system of remote-controlled switches to protect Washington Electric from prolonged GMP outages. If GMP experiences a fault on its transmission-line circuit, the switches can disconnect Washington Electric from the problem area and feed power to the Co-op in a matter of minutes from a different direction.

“That would have eliminated 80 percent of the outage hours the substation experienced in 2004,” said Weston. “This will be a huge improvement for our folks in that area. And it comes from working cooperatively with GMP and the Hardwick and Morrisville utilities.”

Lineman’s Daughter Receives Cavitt Scholarship

Christine Brassard of Barre Town, a sophomore majoring in psychology at Colby-Sawyer College in New London, N.H., won \$500 in December as WEC’s recipient of the Gary Cavitt Memorial Scholarship. Christine is the daughter of Class A Lineman Larry Brassard, a 22-year employee of Washington Electric Cooperative, and his wife Judy.

The scholarship program was funded by friends and family of Gary Cavitt, who served as WEC’s general manager in 1996. Cavitt passed away in December 2003, after which Sara Cavitt devised the scholarship program in her husband’s honor. The one-time award was available to children of employees at each of the six electric co-ops where Cavitt worked over the course of his 30-year career. Applicants had to be attending college, and working, in order to be considered. Christine worked at WEC’s office during two summer vacations.

Christine, a 2003 graduate of Spaulding High School in Barre, was named to the Dean’s List at Colby-Sawyer.

“She’s a very determined young person who knows what she wants to do,” said her mother



Christine Brassard