

WEC CO-OP CURRENTS

'Reverse' Fuel Switching?

WEC Recommends The 'Pledge' Instead

Washington Electric Cooperative does not want history to repeat itself. During the 1990s WEC led the way among Vermont electric utilities in assisting its members to change from electric space heating, water heating, and clothes drying to other, less-costly fuels. Those were likely to be fuel oil or propane for heating, and LP gas (propane) for water heaters and dryers. WEC's programs were called "demand-side management," and in those days, just a decade ago, fossil fuels represented a less-expensive option than electricity for Co-op members.

But now the tables have turned, and Washington Electric and other Vermont utilities are again fielding inquiries about fuel switching – only now, people are asking about changing their home heating and appliances from fossil fuels to electric power. The reason is cost. Every American knows that petroleum-based fuels are increasing in cost to a degree that is not just shocking, but frightening to homeowners – particularly those in cold climates like Vermont.

This time, WEC does not want to lead the pack in fuel switching. But the fact that Washington Electric

hasn't had a rate increase since 1999, and is not expecting to raise its rates in the foreseeable future, presents a problem.

"One of the unintended outcomes is that, for all utilities but especially for ours, electricity prices look safe at the moment," said Bill Powell, Washington Electric's director of products and services.

"What's more," Powell continued,

"some people are also pointing to the fact that our electricity comes from relatively 'green' sources and saying, 'Why shouldn't I be using this locally produced green

energy instead?'"

WEC's answer to these questions is unequivocal: This is not the time to start using electricity for residential hot water or heating.

"The relationship between the price of electricity and a gallon of oil or propane is always changing," said General Manager Avram Patt. "People should not make long-term decisions based on the short-term prices of the day."

Commenting while attending a national electric co-op conference, Patt added that national experts believe that, while we are at the moment experiencing an unrealistically high "bubble" price for

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Willem Lange held WEC members enthralled with his humor and insights as he spoke at Washington Electric's Annual Membership Meeting on May 28. More photos from this year's event appear inside.

Co-op's Proposed Rate Design Goes To PSB

How Will it Change Members' Bills?

By Avram Patt,
General Manager

Washington Electric Co-op has filed a Cost of Service and Rate Design proposal with the Vermont Public Service Board, and the PSB has opened a proceeding (Docket No. 7427) to consider the proposal.

The new rate design proposal has been in the works for well over a year. We first discussed it with members at our 2007 Annual

Meeting, then at our two community meetings last October in Calais and Tunbridge, and we followed up with reports in Co-op Currents after those meetings. Under this rate design the great majority of WEC members will either see little change in their bills or they will see their electric bills go down. A small number of members will pay somewhat more. The proposal will change how every WEC member's bill is calculated, so

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Washington Electric Cooperative
East Montpelier, VT 05651

Inside

Next stop: The Public Service Board. WEC's Board of Directors has approved a new rate design for the Co-op, but PSB examination and a public hearing must precede its implementation. See pages 3 and 7 for information and official documentation for our report that begins on page 1.

The "twister" didn't materialize, thank heavens, but 2,300 WEC members lost power in the June 10 storm. Page 2.

Look before you leap! The television world will change on February 17, 2009, when broadcasting goes digital, but many of those large, high-definition units are big-time energy drains. Consider your alternatives. Page 7.



It's not official unless Weston Cate shows up. A respected voice in central Vermont affairs for many decades, Mr. Cate (above, right) attended WEC's 2008 Annual Meeting with his son Paul, both of East Montpelier. Coverage of the Annual Meeting starts on page 4.

No Tornado – But A Doozy Of A Storm

The storm that plowed through Washington Electric Co-op's service territory on Tuesday, June 10, came well-advertised. Weather forecasters were alerting Vermonters of a possible tornado – a warning rarely heard in Vermont.

In the event, though, while it was a powerful storm preceded by ominous dark clouds, high winds and lightning, it didn't register as one of the worst on record for WEC. The first wave of the storm swooped over the Green Mountains from the west and hit central Vermont in the afternoon, roughly between 3:30 and 5:30 (in different parts of the service area). The winds broke and toppled trees, knocking down wires and causing, at the height of the damage, outages to some 2,300 members – nearly a fourth of the Co-op's membership of 10,000.

"Our crews were here and ready," said WEC Operations Director Dan Weston. "No one had gone home yet, and besides we knew it was coming."

The trucks were dispatched throughout the territory, coordinated by the storm-response team at WEC headquarters who accumulated the information called in by members reporting their outages. The most severe damage was in the western part of the territory, including Fayston, Middlesex, Worcester, Calais, East Montpelier, and Northfield.

"We lost four poles in that storm," said Weston. "One was in Fayston, where a large, perfectly healthy pine, two and a half feet thick, was snapped off around 16 feet up the trunk and thrown into our lines. It takes some serious wind to do that; it was a pretty powerful storm."

The crews had restored roughly half of those outages by dark, but a second wave swept through at around 9 p.m., this one dividing into two storm centers and hitting towns in the south and the north. "We lost some lines in Brookfield," said Weston. "But this was different in that a lot of these were individual outages instead of whole sections of line coming down; in some cases lightning took out the transformer fuses, leaving those homes in the dark."

Other towns hit in the second wave included Ryegate, Cabot, and Walden. By morning (Wednesday, June 11), 1,200 or so members were still without power.

"We got our last member back on by nightfall," Weston reported.

The longest outages from the June 10 storm were around 31 hours. WEC board members were not spared; directors Don Douglas, who lives in East Orange, and Marion Milne of West Topsham both were out for around 25 hours. General Manager Avram Patt, in Worcester, lost his power for six hours.

"We want to thank the Morrisville and Hardwick electric departments, who

came to our assistance," said Patt. "Also our members, who were very patient and understanding."

"This gives us a chance to remind people that they need to call in and report their outages," Weston added. "Some of the repairs could have been made more quickly if we'd known about them. If people call, it helps us plan the work more efficiently and get people back on sooner."

"Our members play a critical role in

the process of restoring power to WEC's electrical system," Weston continued. "They are our eyes and ears and we rely on them to help us expedite repairs by calling in and letting us know they are without power and providing important information as to where the problem—such as a tree on the line – may be."

Okay, so there was no tornado. It wasn't an historic storm, after all. But it was the most destructive storm in WEC's territory since April 2007.



Top: Folks chat over dinner at the Co-op's 69th Annual Membership Meeting at the Barre Elks Club. **Center:** WEC member Bud Haas of Bradford, a former board member and an ardent proponent of efficiency and recycling, speaks from the floor, while **(bottom)** members Alex Thayer (left) and Ed Hutchinson of Plainfield pay heed.

Co-op Currents

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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.

Proposed Rate Design

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we want to explain it in understandable terms.

The proposed rate design does four things:

- It allocates our costs of providing service fairly among the different rate categories (residential, commercial, and large power users).
- It clarifies the definitions for WEC's rate categories.
- It eliminates the differential between regular residential and commercial, and seasonal residential and commercial rates; seasonal accounts have been paying a slightly lower rate per kilowatt-hour (kWh).
- Most significantly, it establishes an inclining rate structure with a different cost per kilowatt-hour depending how much a member uses. The fixed customer charge on your bill is reduced for all rate classes. In each rate class, the first kilowatt hours you use each month will be sold at low or moderate rates. Usage above a certain amount will be sold at a higher rate. Low or moderate users will pay for all or most of their usage at the lower rates. Higher users will be charged for some of their usage at the higher rate per kWh.

Is this a rate increase?

No. An electric utility files a rate-increase request with the PSB when it is not collecting enough revenue to cover its costs. As we have reported recently, WEC has not filed a rate-increase request since 1999 and we do not need to collect more revenue in total from our members at this time. The proposed rate design is "revenue neutral."

What is a "rate design?"

WEC and other utilities are required by state regulators to conduct a Cost of Service (COS) study from time to time. This study analyzes all the different types of costs involved in supplying power and running our distribution system. Different classes of customers can cost the Co-op more or less to

serve, and these costs will change over time. Once the COS study determines what types of customers are currently responsible for what costs, we design a rate structure that, as closely as possible, collects the right amount in rates from the different types of customers or members, and eliminates inequities that may have developed over time. The Co-op's rate design has for the most part not been updated in many years.

Again, the purpose is not to collect more in total, but to collect it fairly among our members based on what it costs to serve them. WEC's proposed rate design also differentiates among the members within each rate class based on how much electricity they use.

What is the proposed new rate structure?

Our present and proposed rate structure for each rate class is shown in the table below. It is an inclining structure, which means that beyond certain points, higher users pay somewhat higher rates. Here are the key changes:

- The monthly charge is reduced for each rate class.
- Regular and seasonal residential members will receive their first block of power at approximately 9.7 cents/kWh. This primarily represents WEC's allocation of low-cost hydro power from the New York Power Authority. Low-cost NYPA power is available to residential customers of municipal and cooperative utilities, who have seen this block on their bills for many years. It was once 300 kWh per month, but our share of NYPA power has declined in recent years.
- All WEC members will receive a "Co-op Block" of up to 300 kWh at a moderate rate. This rate is approximately 9.8 cents/kWh for residential accounts, 10.8 cents for commercial, and 8.8 cents for large power users.



General Manager Avram Patt, speaking in May at the Annual Meeting.

power. (Our 11 large power accounts also pay a significant "demand charge.")

Why is the Co-op proposing an inclining rate structure?

WEC's Board of Directors, staff, and consultants put a lot of work and thought into this proposal. In addition to crunching the numbers and making sure costs were allocated correctly, our proposed rate design is consistent with directions and priorities set by your elected board members, to encourage wise energy use as we move into an era of more limited resources

Our proposed rate design is crafted to encourage wise energy use as we move into an era of more limited resources and higher costs.

and higher costs. An inclining rate structure sends a signal to ratepayers to conserve and to use energy efficiently and wisely. It is a recognition that we are no longer

in an era of energy abundance, that traditional energy sources such as fossil fuels are getting scarcer, and that the cost of all energy sources including renewables will remain high. The concept of inclining rates was also endorsed this year by the Vermont Legislature.

For our residential members, WEC has in fact had an inclining rate structure for a long time, with a relatively low customer charge, a

low-cost NYPA block, and then a higher rate for all kilowatt-hours past the NYPA block. The proposal before the PSB makes this inclining rate structure more noticeable for residential users, and introduces an inclining structure for other rate classes.

For all rate categories, the new rate structure will provide basic service at a moderate, affordable cost, but will recognize that the members who use a lot of electricity make it necessary for us to find new power sources, which adds to the Co-op's costs. As with the other components of the proposed design, the higher tailblock rate for the last kilowatt-hours used is intended to allocate costs fairly to those members who are causing us to incur them, and to assure that higher energy users pay their share of our costs.

How will this affect members' bills?

The vast majority of members should see their electric bills go down, whether they are residential, commercial, or large power users. A small percentage of members with high usage will see their bills go up. Again, the total amount of revenue collected from members should remain the same.

- **Residential.** About 98 percent of all WEC members are in the residential categories. This also includes some farm accounts and home-based businesses. (Farms and home businesses may also choose to have their business use metered separately as a commercial account.) Among regular year-round residential members, 92 percent will see bill decreases compared to their present bills, ranging from 0.1 percent to almost 17 percent. Members using less than 1,300 kWh/month should notice a decrease compared to what they pay now, except for about 400 members who use only about 150 kWh or less. (These very low users will see an increase in the range of \$1/month, caused solely by the changes in our NYPA allocation.) For our residential seasonal members,

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Class Of Service	Monthly Customer Charge	Existing Rates As Of 12/1/2000	Proposed Rates Effective 5/7/08
Farm & Residential	\$9.24 Current	1st 150 kWh/mo. \$0.07387	1st 70 kWh/mo. \$0.09684
	\$8.00 Proposed	Over 150 kWh/mo. \$0.16207	71-370 kWh/mo. \$0.09765
Seasonal Residential	\$55.44 6-mo. Prepayment (\$9.24/mo.) - 2.97 Discount of 5.36% for prepayment \$52.47 = \$8.75/mo. Current	1st 228 kWh/mo. \$0.07387	1st 108 kWh/mo. \$0.09684
	\$48.00 6-mo. Prepayment (\$8.00/mo.) Proposed	Over 228 kWh/mo. \$0.15322	109-558 kWh/mo. \$0.09765
Small Commercial	\$9.89 Current	Per kWh/mo. \$0.15532	1st 300 kWh/mo. \$0.10765
	\$8.00 Proposed		Over 300 kWh/mo. 0.17342
Seasonal Commercial*	\$59.34 6-mo. Prepayment (\$9.89/mo.) - 3.18 Discount of 5.36% for prepayment \$56.16 - \$9.36/mo. Current	Per kWh/mo. \$0.14523	1st 450 kWh/mo. \$0.10765
	\$48.00 6-mo. Prepayment (\$8.00/mo.) Proposed		Over 450 kWh/mo. \$0.17342
Large Power	\$64.71 Current	Demand Charge per kWh/Month . . \$13.08	Demand Charge per kWh/mo. . . . \$12.79
	\$16.00 Proposed	Per kWh/Month \$0.08274	1st 300 kWh/mo. \$0.08781
Security Light Rate		Per 100 Watt Light/Month \$12.42	Per 100 Watt Light/Month \$11.11
		Per 400 Watt Light/Mo. \$24.83	Per 400 Watt Light/Month \$22.21

WEC Celebrates A 'Fabulous' Year

Annual Meeting Provides Hope, and Challenges, For the Future

Probably all the members who didn't attend WEC's Annual Membership Meeting on May 28 at the Barre Elks Club. They missed out on the fun. There was a lively discussion about energy, which may not sound like a roaring good time, but Co-op members in attendance clearly understood that our part of the world (at least) is on the cusp of crucial, essential – and perhaps exciting – changes regarding how we get energy, and how we live with using less of it.

Those absent Co-op members also missed a good sit-down meal and fellowship around the table with folks from throughout the service territory. They missed vying for door prizes (admittedly, kind of a poor-man's lottery). And they missed hearing Willem Lange "do" a mosquito. Lange, a well-known Yankee yarn-spinner who migrated last fall from New Hampshire to East Montpelier and became a Washington Electric Co-op member, was the guest speaker, and he charmed his fellow members with a soliloquy that was part Aesop Fable (entertaining vignettes with a moral lesson) and part standup comedy. One of the highlights was his imitation of a single mosquito in a pitch-dark bedroom, and the havoc it can cause when a couple is trying to sleep.

The turnout was pretty good this year: 201 people, including WEC members, Co-op employees, special guests (contingents from other utilities, including our sister co-op Vermont Electric Cooperative; and Beth Sachs, who was a co-founder of Vermont Energy Investment Corp., a

"Sometime in the future the market will do its job, people will build more renewable power, and the value of our RECs will go down. Then we'll come to a time when we'll need a rate increase. But no rate increase is on the horizon."

— Treasurer Don Douglas

pioneering energy-efficiency business that organized Efficiency Vermont for the state; Beth is retiring from VEIC; political folks (state senators and House members, and House Majority Leader Gaye Symington, who had recently announced her candidacy for Vermont governor).

But some of the people with the greatest stake in WEC's future were not there. Dina DuBois from Corinth made that point when she rose to speak. First she greeted several of her neighbors by name, noting that more of us could be car pooling and suggesting that WEC figure out a way next year to help coordinate ride-sharing for people attending the annual meeting.

Then she made another observation. "There's a lot of gray hair here, like mine," said Dina. "Let's all of us encourage younger people to come, too. Let's see if each of us can bring a younger [Co-op member] with us when we come next year."

After all, she explained, the Co-op is making decisions that will affect younger members even more than people in their 50s and 60s, and older. For example, WEC's electric plant in

Coventry, Vermont, which generates power using landfill methane as fuel, will provide electricity for WEC members for another 25 to 35 years, at a cost that's looking more like a bargain all the time.

Being a co-op, Washington Electric provides opportunities for its customers (the owners) to take part in the kind of planning that led to the Coventry facility. But that means getting involved, and Dina reminded everyone that it's important to get younger WEC members in on the action.

Board members elected

The action this year included electing three members to serve on the board of directors, for three-year terms. There were four candidates: Wendell Cilley of West Topsham, Don Douglas of East Orange, Tim Guiles of Williamstown, and David Magida of Middlesex. Cilley, Douglas, and Guiles were incumbent directors. When the votes cast at the annual meeting were added to the votes mailed in by the deadline, the results were announced: the three winning candidates were Cilley (771 votes), Douglas (763 votes) and Magida (630 votes). Guiles polled fourth with 504 votes.

Board President Barry Bernstein congratulated the winners, and thanked Guiles for his three years of service to the Co-op.

"Tim has been active and involved as a board member," said Bernstein. "He has been diligent in pushing us on energy efficiency. Thank you, Tim."

Other business included the presentation of service awards to Co-op

employees who had reached a five-year milestone. Eight employees received awards this year (see box below), but the longest-serving WEC employee was Line Foreman Tim Pudvah, who marked his 35th year as a Washington Electric lineman. Tim broke in doing line work for WEC during the summers while he was still in high school. When he went into the profession full time he was hired by a contractor who did a lot of work in New Hampshire. But Tim was a local boy and after a couple of years he chose to apply for a position closer to home, at Washington Electric. He was hired in 1973.

As Tim Pudvah accepted his award from President Bernstein and Manager Avram Patt, he received a warm ovation from the audience, who knew and appreciated that Tim was one of those workers who go out at any time of day or night, in any kind of weather, to restore people's electric power.

"Longevity at jobs of any kind is not something you see very much these days," Patt observed. "It's one of the really good things about the Co-op. A lot of our employees stick with us for a long time, and that makes us a better company."

Rates holding steady, for now

Another highlight of this year's meeting was the Treasurer's Report.

WEC Employee Recognition

Each year at the Annual Membership Meeting, Washington Electric presents Service Awards to employees who have reached five-year milestones with the Co-op. This year employees who received awards, and the thanks of WEC's Board of Directors and the members in attendance, included:

5 years

Brian Wilkin,
Utility Field Technician
Hans Pope-Howe, Lineman

15 Years

Cathie Vandenburg,
Plant Accountant
George Mears,
System Maintenance Technician

20 Years

Ed Schunk,
T & D System Technician

25 Years

Larry Brassard, Class A Lineman
Linda Nelson,
Assistant Director of Finance

35 Years

Tim Pudvah,
Line Construction Foreman



A crowd of more than 200 people attended WEC's Annual Meeting this year, not only listening to reports from WEC's officers but sharing their own opinions in a lively exchange about energy issues in the modern world.



Co-op President Barry Bernstein (left) and General Manager Avram Patt (center) present a service award to Assistant Director of Finance Linda Nelson, who has lent her expertise and personal warmth to Washington Electric for 25 years.



Member David Magida (right), of Middlesex, won election to a three-year term on WEC's Board of Directors.

It was WEC Treasurer Don Douglas' fortune to be able to deliver good news to his fellow members.

"We had a fabulous year in 2007," Douglas announced. "We didn't have any horrible storms that flattened our [electric] system. Plus, sometime in the last [20th] century the board began envisioning transferring our power supply to get power that was not produced by fossil fuels. It was mainly for environmental reasons; we didn't really know it would turn out to be such a positive financial benefit for us, too."

But it has. Douglas explained that with output from the Coventry generation system providing more than 50 percent of WEC's power needs (a portion that will rise further after WEC installs a fifth engine at the plant), WEC has been in a position to sell electricity; the Co-op often has excess power because it is still purchasing wholesale power through several long-term contracts. By selling power onto the New England grid WEC reduces the

percentage of its budget devoted to wholesale power procurement.

"When I started as treasurer in 2000, 50 percent of our budget was spent on power," said Douglas. "Last year [2007] it was 30 percent."

Thirty percent is almost unheard of for power costs; it's not uncommon for utilities to spend 70 percent of their budgets on wholesale power. In addition, Douglas explained that WEC has been able to sell "renewable energy credits" (RECs) to out-of-state entities needing to satisfy renewable power requirements. WEC then banks a portion of the income to defer an eventual rate increase.

"We think that sometime in the future the market will do its job, people will build more and more renewable power, and the value of our RECs will go down and eventually disappear," said Douglas. "At that point, we'll come to a time when we'll need a rate increase.

But for the foreseeable future, no rate increase is on the horizon."

What was and wasn't said

There were plenty of questions about energy directed to the board and general manager from audience members. One questioner asked if WEC had considered plug-in hybrid utility trucks. "The concept makes sense," said Patt, and the Co-op – which recently began running much of its fleet on biodiesel – will be watching

to see if this becomes feasible.


Someone asked if the Co-op could sell RECs derived from power provided by net-metering installations using photovoltaics. Patt said it was unlikely, since RECs are associated only with power that is registered and accounted for on the New England grid. "When a member net meters, they are producing power for their own use and it does not register on the grid as generation."

Lori Barg of Plainfield asked WEC to do more to encourage members to use off-peak power, and Jackie Folsom of Marshfield encouraged the Co-op

to be sure that farmers had opportunities to become more energy-efficient, particularly in light of WEC's proposed new rate design which modestly increases costs for high consumers (see "Proposed Rate Design Goes to PSB," page one).

Steve Farnham of Cabot said, "I'm happy to have an electric utility with an enlightened philosophy. But the focus I hear is on conservation. I don't hear a lot about getting members to generate their own power. I would like to see [WEC's sales] going down to zero, where the Co-op isn't selling electricity anymore."

Then it was time for Willem Lange and his Yankee yarns. His last was a long tale about a girl caught shoplifting in a country general store, and the gentle, indirect way the proprietor reprimanded her. Lange closed with this conclusion: "It's always about what isn't said in Vermont, where the meaning lies. That's what it's like here, and I hope the Lord gives me 50 more years of it."

And with that bit of wisdom, the neighbors filed out into the night, into their own corners of this unique and precious land. 

Lange's soliloquy was part Aesop Fable and part standup comedy.



General Manager Avram Patt thanks Line Construction Foreman Tim Pudvah for his extraordinary 35 (and counting!) years of service to the Co-op.



Annual Meeting stalwarts Jepson Wulff and Neely Washington, who help publicize WEC events in their weekly publication, The Middlesex Newspaper.

Half of your home's energy consumption goes toward heating and cooling. Have you remembered to replace the filter(s)? Your system will run more efficiently, and you'll save money.

2007 System Reliability Report

Keeping Up With Rights-of-Way Is Showing Results

The graph comparing Washington Electric Co-op's outage records for 2005, 2006, and 2007 is informative, but it doesn't tell the whole story. Included as part of WEC's annual System Reliability Report to the Vermont Department of Public Service (DPS), it traces the monthly accumulation of outages from all causes – which means that the results largely reflect the collective impact of weather events during the course of the year. For last year (2007), it reveals a storm in March that caused a spike in outages. That was the only serious, outage-causing weather event the whole year, but it was enough to push "Total Consumer-Hours Out" (which counts every hour without power for every Co-op member) slightly higher than 2006's tally of 80,860.

Similarly, the graph shows that 2005 also was a relatively calm year – until the memorable October snowstorm that damaged utility systems across the state. That one storm caused WEC's "Total Hours Out" statistic in 2005 to balloon to nearly 350,000 – with 73 percent due to the October 25-29 storm.

That's how it goes for rural electric systems in Vermont.

"You can improve upon 90 percent of the things that you have direct control over, like changing out faulty equipment and rebuilding substations," said WEC Operations Director Dan Weston, "but you're always going to have the weather. The weather will continue to be the number-one influencing factor on our reliability reports and our members' experience of power outages."

Weather can be a fickle friend. Members might recall the St. Valentine's Day storm in February of 2007, which dumped three feet of snow on most of the state. You don't see it reflected dramatically in the outage graph.

"That storm didn't cause a single outage on our system," Weston explained. "It was light snow and no severe winds. Had we gotten a foot of heavy, wet snow, or had winds above 40 or 45 miles an hour, we would have had multiple outages."

However, if you're a Vermont utility you can't just sit back and blame the weather for your problems. Utilities can and must reduce the impact of snow, ice, and high winds. Through the annual budget process, the WEC board has been systematically improving its right-of-way (ROW) management, as well as providing the resources for the Operations Department to keep the poles and wires in good shape (which is called "hardening" the system).

During the summer WEC flat-cuts sections of the ROW, targeting the most overgrown and problematic areas. (Washington Electric does not use chemical spray on its right-of-way.)

The System Reliability Report for the previous year helps the Co-op identify where those areas are. This summer, contracted tree-clearing crews will be doing a lot of work in the Brook Road/Pike Hill Road/Limlaw Road area in Corinth, continuing work they started there in 2007.

In winter, the emphasis is on danger tree removal. Accumulated snow makes it virtually impossible to clear right-of-way, so instead WEC has personnel patrolling the lines by trucks, snow machine, and on snowshoes, looking for tall, leaning, and weakened trees that could crash into the lines in stormy weather.

"The danger tree-removal program is extremely effective," said Weston. "Every tree we take down that's diseased, rotten, or dying is an outage that didn't happen."

But it's a rigorous program. WEC now owns and manages nearly 1,300 miles of right-of-way in its 41-town central Vermont service territory (think of the power lines as stretching from Montpelier to Wichita, Kansas), and a high proportion of it is off-road, in fields and forest – no easy terrain for the danger-tree patrol.

These summertime (re-clearing) and wintertime (danger tree) programs reduce weather-caused outages. But to gauge progress on improving reliability through structural and technical advances, the numbers for non-storm-related outages are more telling.

According to the 2007 report, outages from all causes except major storms have averaged 826 for the past three

years. In 2007, there were 778 separate outages, 48 fewer than the three-year average.

The total number of consumer-hours out in 2007 – again, exclusive of major storms – was 66,047. That, too, was better than the three-year average (81,050).

Another sign of improvement was that the average duration of outages declined by almost 23 percent in 2007.

"In general, excluding power-supplier outages [problems that originate on transmission lines owned by other utilities, which provide electricity to WEC substations], Washington Electric experienced fewer outages, and outages of shorter duration, in 2007 than in any of the last five years," Weston reported.

This good news wasn't system-wide. People around Groton, Corinth, and Topsham (very rural and high-altitude terrain) fared worse than most members. The lines serving them are slated for attention in WEC's Action Plan for 2007.

Signs of progress

Here's some refreshing news contained in the report. In 2006, problems on Green Mountain Power's transmission lines, which provide power to some of WEC's substations, were the second-leading cause of "hours-out" (of power) for Co-op members. It's been a long-standing problem. But in 2007 failures on the GMP transmission lines were less significant.

"There was real improvement," said Weston, "and we appreciate it."

Green Mountain Power, Washington Electric, and the municipal utilities in Hardwick and Morrisville had worked together to devise a system of remote-

controlled air-break switches on the GMP transmission lines. It protects Co-op members served by WEC's South Walden substation.

"In 2007, the switches enabled faults on [GMP's] 3319 line to be isolated quickly, reducing the duration of the outages from several hours to mere minutes," the report explained. Similar improvements shortened outages from another GMP line, which serves WEC's Moretown and Mt. Knox substations.

Another significant cause of power interruptions in 2007 was planned outages, which the Co-op purposely executes to when repairing or upgrading the system. One such event occurred near the end of 2007 when crews shut down the South Walden substation, and its 1,150 members, to replace insulators on the transmission lines. It was a big job, and WEC hired crews from the Morrisville and Hardwick electric departments to help.

Weston hated to see the hours go up during that planned outage. The Co-op works with the Department of Public Service to establish reasonable reliability targets, and Weston aims to bring WEC's numbers safely inside that range. "It's a pride thing," he said.

Nevertheless, planned outages serve a vital purpose.

"What we don't want is for the power to go down for four hours in the middle of the night in February because of some cracked insulators that we left out there. So the smart thing to do is shut it down purposely at a time when you can get an extra crew in, and just get the job done."

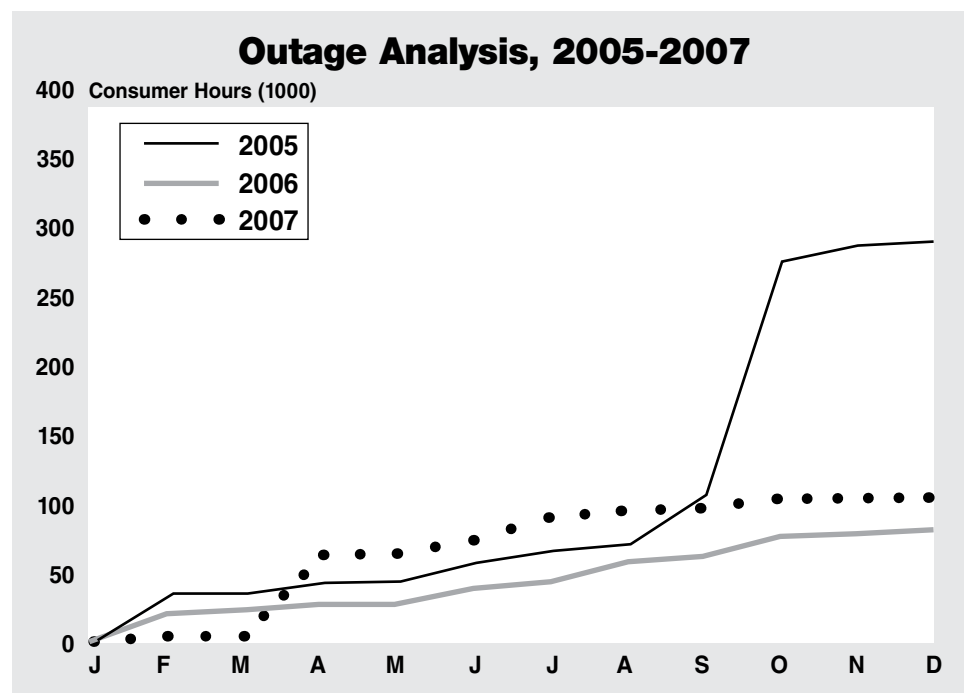
This summer the Co-op will continue its fuse-coordination program, as well as its summertime pole-inspection, -replacement and -treatment program, initiated in 2004. Special attention will be paid to the Mt. Knox circuit feeding Corinth, Topsham, and Groton. The Board of Directors has authorized an additional \$92,000 in right-of-way spending to re-clear that circuit.

Meanwhile, a persistent problem continues – the failure of a particular brand of porcelain "cutouts" (fuseable disconnects, prone to cracking) that were mounted by the thousands on WEC's system in the 1990s. In 2007 WEC made headway by searching out and removing more of the devices, and installing some 600 polymer replacements.

Weston's plan is to change out another 600 or more in 2008. The hope is that, like the GMP transmission line failures that plagued the Co-op for years, this long-running reliability headache will begin to disappear.

Outages from all causes except major storms have averaged 826 for the past three years. In 2007, there were 778 separate outages, 48 fewer than the three-year average.

People in the Groton-Corinth-Topsham area fared worse than most members. The lines serving them are slated for attention in WEC's Action Plan for 2007.



Preparing For The Digital TV Age

Shift From Analog To Come At An Energy Price

The end of analog TV broadcasting is coming. Months before the appointed hour – February 17, 2009 – public service announcements and home-electronics commercials are informing consumers that on that date television broadcasters, by order of the federal government, will cease transmitting analog signals, moving entirely to digital broadcasting. The stated purpose of this conversion is to free up more frequencies for public-safety communications such as police, fire, and rescue operations.

Consumers may now be pondering two questions:

1) Will their screens go blank on February 17?

The demise of analog broadcasting mostly will affect people who receive their broadcast signals “over the air” – in other words, with antennas. Cable

and satellite customers mostly won't be affected, regardless whether they have analog or digital sets.

2) With the video world going digital, is this the time to move up to one of those new, large, flat screen high-definition TVs, whether a plasma or LCD (liquid crystal display) type?

The temptation is understandable; the liquid crystal and plasma technologies provide a more vivid picture than the cathode ray TVs we're used to.

What's not mentioned in the public service announcements and commercials is the energy consumption of HDTV (high-definition television) models. A researcher for Northern Virginia Electric Cooperative (NOVEC), writing for the cooperative's member publication last November, found that the average plasma TV draws 328 watts of power— about two and a half

times the power used by the average analog tube TV (146 watts). Some models, in fact, draw considerably more. NOVEC found a 65-inch LCD high-definition television that consumed 583 watts – although the average LCD model, the study said, draws 193 watts.

According to The Washington Post, the U.S. Department of Energy concluded that a plasma TV will use about 849 kilowatt-hours (kWh) of electricity a year, and a like-sized LCD unit 387 kWh. At a 10 cents/kWh (the national retail-electricity average), power for the plasma set would cost \$46.20 a year more than for the LCD, and would add an additional 500 pounds of carbon pollution to the atmosphere. Of course, even the LCD set would bring added power costs and emissions (from electric generation) over an analog set.

Screen size is the most significant

factor in energy consumption, no matter what technology you purchase. And when you add the accessories – the DVD players, gaming consoles, and digital recorders that expand our use of the television set – we're using those sets more than ever.

We're even “using” them when they're off. That's because modern television sets don't really turn off; the “off” switch puts them in standby mode, and they continue to draw power. The 65-inch LCD set noted above drew 76.11 watts when it was supposedly off. That's like having a 75-watt incandescent bulb burning in your house 24 hours a day.

All in all, the Environmental Protection Agency (EPA) estimates that televisions, when combined with the accessories we use with them, account for about 10 percent of an average household's annual electricity bill. That

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Proposed Rate Design

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75 percent will see a bill decrease. In all, 600-700 year-round and about 320 seasonal residential members will see their bills increase somewhat, based on their past usage history.

- **Commercial.** Among our regular small commercial accounts, 72 percent should see a decrease in their bills (a substantial decrease for the lowest-use accounts), and among our seasonal commercial accounts, 61 percent should see a decrease.
- **Large power users.** WEC only has 11 members in this category, and while they are large for us, they are not very large by utility standards. The Cost of Service study determined that this rate class as a whole should be paying slightly less and so they will see modest decreases.

The fact that a small number of members will see bill increases was not taken lightly as this plan was considered by your Co-op's board and management. While most businesses on our lines do not use a great deal of electricity and will benefit from the change, others, including dairy farms, will pay a bit more. On balance, the proposed rate structure assigns our costs fairly, and the bill increases for large users will be quite modest in almost all cases.

The bill impacts summarized above are for illustration purposes. Every member's usage varies from month to month and how much your bill will be is determined by two equally important factors: the rate structure, and how much you use. The inclining rate structure is one way of letting you know that, looking ahead, using more electricity not only costs you more, but also costs the Co-op more. Ultimately, the most important comparison is not with what your bill might have been


under our present rate structure, but with what it might be if you used more or less electricity.

Public hearing and comments

This issue contains a formal notice from the Public Service Board about a public hearing on July 15th and opportunity to comment on WEC's proposed Cost of Service and Rate Design. In addition, members should feel free to contact me with any questions.

Integrated Resource Plan also up for PSB review

Washington Electric Co-op has also filed a new Integrated Resource Plan (IRP) with the Public Service Board (Docket No. 7432). Utilities must file updated IRPs every three years, and the key word is “integrated.” WEC's IRP takes a longer-range look at: our power-supply needs and the supply sources we have or expect to have; the anticipated demand for electricity from our members and the impact of efficiency and conservation on that demand; and our infrastructure needs (our poles, wires and other utility plant).

Supply, demand, and infrastructure are all integrated. We cannot plan for one without considering the others. Regular readers of Co-op Currents should have a relatively good understanding of WEC's situation and where we see ourselves heading, and the IRP is consistent with what we have communicated to our members. The IRP is a fairly technical document, but it is understandable for any members who would be interested. Members are also invited to comment about the Integrated Resource Plan at the same public hearing on July 15th. A copy of the IRP will be posted on our website, or can be obtained by contacting me at the WEC office. 

Notice To Members Of Washington Electric Cooperative Of Public Hearings On Proposed Rate Design Change And Integrated Resource Plan

Rate Design

On March 26, 2008, Washington Electric Cooperative, Inc. filed with the Vermont Public Service Board (“PSB”) a proposed allocated cost-of-service study and rate design change. The Cooperative requested that this rate design change become effective with service rendered on and after May 12, 2008. The Public Service Board suspended that filing, and opened an investigation to determine the justification and reasonableness of the proposed rate design change (PSB Docket No. 7427). That investigation is still continuing, and the proposed rate design change will not go into effect until it is approved by the Public Service Board.

One aspect of the rate design filing proposed the implementation of an inclining rate block structure, whereby the charge for kilowatt hour consumption below 370 per month will be at a lower rate than the charge per kilowatt hour over 370 per month. See related story on page 1.

Integrated Resource Plan (IRP)

Under 30 V.S.A. Section 218c(a)(1), a “least cost integrated plan” for a regulated electric or gas utility is a plan for meeting the public's need for energy services, after safety concerns are addressed, at the lowest present value life cycle cost, including environmental and economic costs, through a strategy combining investments and expenditures on energy supply, transmission and distribution capacity, transmission and distribution efficiency, and comprehensive energy efficiency programs. The Cooperative filed its proposed 2008 IRP in February, and the PSB is reviewing the proposal in Docket 7432.

Public Hearing

A public hearing will be held on both matters before PSB Hearing Officers Andrea McHugh and Jay Dudley on Tuesday, July 15, 2008, at 7:00 p.m. at the Old Brick Church (adjacent to the Cooperative's office building) in East Montpelier. Members are encouraged to attend the hearing to obtain information on or comment on the proposed rate design change, and/or integrated resource plan. If you are unable to attend the public hearing, you may submit your comments in writing to the Vermont Public Service Board, 112 State Street, Montpelier, VT 05620-2701, or via e-mail to: psb.clerk@state.vt.us on or before July 11, 2008. The above hearing location is handicapped accessible. Any person with a disability who will need special accommodation should contact the Public Service Board (802-828-2358) by no later than July 11, 2008, if they will need that accommodation.

Reverse Fuel Switching

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fuels caused by a number of factors – including speculation in the energy market – high energy costs will be a permanent fixture. Prices may “dip” slightly when market speculation calms down, but ultimately the trend will be continued increases in the cost of energy.

“At the same time, electricity costs will continue to climb,” said Patt, “even, eventually, at the Co-op. Predicting is hard, but one thing is sure: the relationship between fuel and electric prices is always shifting and changing.”

Another big worry concerns lower-income Vermonters who may plug in portable electric space heaters when they can't pay their heating fuel bill.

“We've already been seeing this for a few years and especially this past winter,” Patt said. “We understand why people feel forced to do this, but they're usually making matters worse for themselves. That electric heat can double or even triple their monthly electric bill, and the Co-op and other utilities are in a position where they're having to disconnect increasing numbers of people for non-payment because of this.”

It's a dilemma that leaves low-income people, particularly, in a difficult situation. That makes a societal response more important than ever – WEC members signing up for the Round-Up program, for example (call our Customer Service Representatives to find out how); Congress and the administration bolstering the LIHEAP program. But the message for WEC members is straightforward: Don't switch to electric hot water, and don't rely on electric space heaters. It's a losing proposition.

For some, a solar solution

WEC's Bill Powell, whose work involves helping members find ways to reduce their electric consumption and get better energy performance from their homes and businesses, proposes a solution that may be suitable for some member households. It's solar hot water.

The best candidates are typically households with three or more occupants, and high hot-water use. A smaller household with less hot-water usage might also benefit from a solar water-heating system, but the cost-effectiveness (or “break-even”) point may be longer-range.

Responding to member interest, WEC solicited proposals from local installers of solar equipment who would be interested in offering a discount to WEC members. Those proposals are being evaluated, and the Co-op will soon make this information available on our website and through other channels.

“Solar hot water is now price-competitive with fuels in many cases,” Powell noted. “People's situations will vary; there will be unique needs in each house. For some households solar hot water can meet 70 percent or more of the hot water load. With a solar system backed up by an electric hot water tank, that could be a savings, roughly

speaking, of \$500 a year from a \$700 electricity cost – the portion of the power bill that now goes to hot water for a four-person household with “average” hot water usage (17 gallons/person/day, which is the U.S. daily average).

So if you are considering lessening your use of fossil fuels, or if you're building or renovating, solar is an option you may want to consider. And it is made more feasible as one of the many incentives in Washington Electric's new “Pledge” program.

Don't be 'average'; Take the Pledge

Whether your primary concern is your monthly power bill, your carbon footprint, or the country's dependence on fossil fuels, your first consideration should not be the source of the power you're using, but how much power you use. WEC strongly recommends that you start by investing in energy efficiency.

That includes people who may not think they need to make energy-efficiency investments – the so-called “average” electricity consumers.

“Our year-round members use an average of 19 kilowatt-hours (kWh) a day,” said Powell. “That comes out to around 570 kWh a month, for an

Energy efficiency and conservation are the best hedge against a volatile energy market. Through Pledge, WEC would like to help you get started.

electric bill of \$88. That's average. The trouble is that if people hear that their usage is average they say, ‘I'm average? No problem!’”

But people who use the “average”

amount of electric power (or more, obviously) are not part of the solution to U.S., Vermont, Washington Electric, or personal energy-demand problems. Being “average” is merely a mathematical formula. If a large number of users on an electric system are wasteful, or for any reason consume a lot of power, the “average” goes up. “Average” doesn't mean efficient, and it doesn't mean cheap.

“Average” consumers can lower their electric bills by becoming more-efficient power consumers, and WEC's Pledge program is the place for Washington Electric members to start. WEC developed Pledge in partnership with Efficiency Vermont (EVT), the state's nationally famous statewide “efficiency utility.”

“Pledge is not a one-size-fits-all program,” explained Powell. “We work with people to identify and correct energy inefficiencies in their homes, and help them make specific improvements that will rectify those problems and lower their electric bills. It usually has the additional benefit of


making the homes more comfortable.”

Members enrolled in the program “pledge” to attain energy-reduction goals, which they set for themselves with advice from the Co-op and EVT. WEC and EVT can often help them defray some of the costs associated with those home improvements. When they are successful and meet their goals, the Co-op presents them a cash reward, which is based on the amount of their energy reduction. Pledge is a service that WEC hopes will “push” members into action and help them lower their use of all energy fuels.

For some of the more costly home energy improvements, members may qualify for financing through the Vermont State Employees Credit Union (VSECU), and because of the cooperative relationship between VSECU and Washington Electric, all WEC members in good standing can qualify for VSECU financing. Under the Pledge program, WEC and VSECU will buy down the interest on the loans.

Energy efficiency and conservation—using less energy, and using it wisely – are the best hedge against a volatile and insecure energy market.

“These are better solutions than reverse fuel-switching,” said Powell.

Through Pledge, WEC would like to help you get started. Call Bill Powell at the Co-op for more information, or check the Co-op's website. 

Digital TV

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percentage will increase with the advent of more HDTVs.

There is a national impact to all this. The EPA estimates that as more consumers switch to HDTV, the nation's energy consumption for TV uses will increase by at least 75 percent.

You can moderate the impact

However, there are ways that people can mitigate these costs.

One of the best and most convenient ways, for Washington Electric Co-op members, would be to purchase a Smart Strip power strip, a new product currently available from the Co-op with a special member discount. Plugging the television (and other entertainment devices) into a multi-outlet power strip has long been the Co-op's recommendation for avoiding “phantom power” – the electricity consumed when the television is switched “off.” Power strips protect the television from potentially harmful power surges, and the strip itself has an on-off button that really does shut down the power to the TV.

But there's a catch: you need to remember to turn off the power strip.

The Smart Strip solves that problem. One of its outlets is capable of detecting when the appliance it serves has reduced its power use and entered its standby mode; it then shuts that load and a series of others completely off (while maintaining power to three other outlets, for devices that should remain energized). Like all basic power strips, the Smart Strip protects your equipment, but it also eliminates

unnoticed energy draws. To learn more about the Smart Strip, and take advantage of WEC's member discount while it's available, go to WEC's website (www.washingtonelectric.coop) and click on the link to the Co-op Store.

There are also other things you can do to save money and power in the coming age of digital broadcasting. For example, you can keep your trusty analog TV and buy a set-top converter box that will receive the digital signal and translate it into analog. The federal government has set aside some \$1.5 billion to provide consumers with \$40 coupons toward the purchase of converter boxes – up to two coupons per household, and there are no income restrictions. With costs running in the \$50-\$60 range, a converter is a relatively small – \$10-\$20 – expense.

However, those who are determined to get themselves a new high-definition digital TV should at least consider how large a viewing screen they really need. The screen area is the largest factor in energy usage, simply because both plasma and LCD technologies use light (although very differently) to create the picture and project a more-defined image. The larger the screen the more light – and therefore electricity – is required. Comparative shopping, perhaps with the aid of Consumer Reports, can help you choose a compromise that will provide a vivid TV

picture while being mindful of energy consumption and its monthly costs.

Conservation-minded shoppers frequently turn to ENERGY STAR® for guidance. (ENERGY STAR is a program of the EPA.) The ENERGY STAR label assures 30-percent energy efficiency in the products it approves, compared to other models.

To date the ENERGY STAR label for plasma and LCD TVs has signified efficiency in the *standby* mode only, not in the operation of the set. However, that's due to change in November, when the EPA will come out with ENERGY STAR recommendations for operating

efficiency in high-definition TVs.

There are significant efficiency differences among the many HDTV models currently available – and there may be more differences as

manufacturers prepare to compete for an ENERGY STAR market. Remember that the ENERGY STAR label does not mean the device doesn't consume significant power; it means only that the model that earns the STAR consumes less power than others of its kind.

For now, the best course for people interested in a new TV for the new digital age is to wait until November to find out ENERGY STAR's recommendations. It could be worth the savings you'll reap by not plunging into the market for the biggest, brightest, and best right now. 