An Important Message from the CEO

Dear VEC Members:

As the CEO of your electric cooperative, I would like to take this opportunity to report to you on VEC’s current financial status and steps that are being taken to lessen projected financial shortfalls.

It is no secret that 2009 is proving to be one of the nation’s most challenging years due to unprecedented setbacks in the financial markets. VEC has not been immune to the effects of the economic downturn.

Like utilities throughout New England and the Nation, VEC is experiencing a significant decrease in projected revenues. Quite simply, businesses and residential customers are using less electricity than expected. VEC’s commercial and industrial revenues are presently running 12% below projections. As a result, VEC has had to sell excess power on the open market at unfavorable rates. Additionally, the costs of running our business continue to increase in areas such as transmission costs and employee benefits like health and pension costs.

To offset the unexpected shortfall in revenue, VEC is taking swift and strong action to reduce and control expenses. Without action, we would have been faced with a budget deficit of nearly $2M at the end of the current fiscal year.

VEC management and staff have engaged in a rigorous, company-wide effort to identify expenses that can be eliminated or temporarily delayed. From tightening the use of office supplies to adjusting VEC’s power purchase strategy, all areas of the business are engaged in this process. Many employee suggestions have resulted in changes that have reduced costs.

All financial contingency decisions were weighed against VEC’s commitment to its members to provide reliable service at reasonable rates, along with excellent customer service in a socially responsible manner.

As VEC members face job losses and reductions in work hours, we took a hard look at our labor costs. As a result, a pay freeze for all VEC employees has been implemented, service quality and reliability incentives have been foregone, and other benefits have been reduced. VEC management works closely with union and non-union employees to identify savings. By agreeing to a pay freeze, members of the IBEW Local 300 helped VEC avert layoffs that could have negatively impacted member service. I am proud to say that VEC employees pulled together to find solutions that will help the Coop move through this difficult time.

There are bright spots despite the difficult financial conditions we are facing. In May, Stanczyk & Poew’s upgrad ed VEC’s financial rating and outlook. VEC exceeded thresholds in all service, quality and reliability benchmarks for the year ending June, 2009 (see related article). We have seen significant reductions in both the frequency and duration of outages, and have installed approximately 30,000 smart meters within the service territory that are resulting in cost savings. At a time when many organizations have struggled to stay alive, VEC finds itself in a stronger financial position, able to weather this passing storm.

VEC remains committed to performing capital projects which will improve our infrastructure and increase efficiency and reliability in the long run. As indicated by the Vermont Public Service Board, these projects all will promote VEC’s future stability.

The costly capital investment that has prompted this rate increase is long overdue, and in-opportunity at best, given the prevailing economic conditions in Vermont and the country at large. With that point noted, it bodes well for VEC’s ratepayers that the need for this investment has been identified and assessed as a result of rigorous organizational scrutiny that VEC’s management team undertook in cooperation with the appropriate regulatory supervision exercised by the Department of Public Service. This top-to-bottom organizational review has produced significant changes in VEC’s leadership practices and strategic planning that are enabling VEC to move toward becoming a stable, productive utility.

One of the greatest challenges for VEC will be around managing future rate increases in a financial environment that has proven to be volatile. In the face of increasing costs and diminishing revenue, the fact of the matter is that rate adjustments will be unavoidable.

See “Message” cont. on pg. 4

Staying Connected Through Social Media Communications

By Kathryn Kantorski, Manager of Communications

As our 20th century electric grid is transformed and modernized through the use of emerging technologies to meet the needs of the 21st century, so is the way we communicate with one another.

With the advent of social media applications like Facebook and Twitter, text messages and email, there are more ways than ever to share information instantaneously. Yet in a rural state like Vermont where internet access is not universal, it remains critical that we continue to use the tried and true methods of communication such as national and local newspapers, radio, and television.

In the electric utility industry, providing relevant information in a timely manner is expected and also a top priority. When the power goes out, members need to know when it will be restored and what caused the outage. The increased use of cell phones and text messaging allows utilities to keep members informed during critical times when outages may be widespread and damage extensive. This is just one example of how social media can work for you.

As a member-owned cooperative, it is also important for VEC’s consumers to be informed with details about capital improvements and expenditures, long-term planning and policy decisions and how each will impact future rates. This information is often included in the Co-op’s newsletters, but is also available on our website.

In the coming months, VEC members will be able to access information about their cooperative in new ways. Web-based communications provide channels for delivering low-cost, real-time information. Here are a few examples that can be found through VEC’s redesigned website at: www.vermontelelectric.coop:

• View hourly and daily consumption on-line using the VEC wantWATCH-ERS application for members with smart meters.
• Follow VEC’s CEO, Dave Hallquist, on Twitter.
• Receive timely updates about outages and restoration through VEC’s internet-based Outage Center. The Outage Center and VEC’s website are enabled for viewing on cell phones.
• Save time and resources by paying bills on-line through VEC’s bill option.

Members who prefer traditional media will still receive the publications they are accustomed to. VEC will continue to produce regular issues of our Coop Life newsletter throughout the year, as well as the occasional Coop Life bill insert. By utilizing a combination of social media and traditional media options, VEC is offering a broader array of communications and capturing the opportunity to keep members informed with real-time information.
Vermont Electric Co-op Fall 2009 - Page 2

“Inside Scoop”

Employee Evolution

by Sally Lumbra, Manager of Human Resources

New faces...

The Human Resource Department is pleased to welcome the following new VEC employees:

Planning Engineer
Moses Galdey, is the newest addition to VEC’s engineering team. As Planning Engineer, Moses will be responsible for all facets of research, planning and design for large new construction, rebuild, increased system capacity and system improvement projects.

Manager of System Operations
VEC welcomes Marcel Lamoureux back to the Coop. As Manager of System Operations, Marcel is responsible for directing and managing the day-to-day functions of VEC’s 24 - 7 System Operations Center. Marcel’s duties also include working closely with our substation manager, construction manager and the engineering department.

Familiar faces...

As VEC introduces its newest employees, the HR Department is also pleased to recognize the professional development and achievements of our existing workforce. Please join us in congratulating the following employees on their recent promotions:

VEC is proud to announce that Brian Farrar of Richford has earned his 1st Class Lineworker Certification. Brian began work as a Meter Reader for Citi- sents Utilities in 2001 and enrolled in the State’s Line Maintainer Apprenticeship program in 2002. Brian completed the academic portions of this program while still holding a Meter Reader position. In 2005 Brian transferred to the Line Department as an Apprentice Lineworker and has now completed all on-the-job training hours required to meet 1st Class Lineworker requirements.

Kevin Lacoss has transferred from System Operations to the construction area as Assistant Construction Manager. Kevin has over 20 years of knowledge and experience to apply in this new position. His work history includes years as a Lineworker primarily in the Northeast Kingdom, Safety and Compliance Specialist and System Operator. Kevin is uniquely qualified to assist with the management of VEC’s construction area in providing VEC members with the most reliable and cost-effective electric service possible.

Congratulations to all!

Spotlight on Director: John Westie District 11

by Jennifer Savage

Touring the house that John Westie is finishing building gives you a valuable glimpse into his priorities, and how those will translate into his own Board service with VEC. John is one of VEC’s newest Directors, representing District 11, elected to the Board at the Annual Meeting on May 30, 2009.

His new house, built high up on the Notch Road in West Bolton and tucked into the trees, is built from Vermont or recycled materials, including some windows rescued from an old Vermont school house and insulation in the ceilings made from recycled newspapers. John, a residential builder by trade, has built the energy efficient structure himself. John also drives the 1974 Chevy pickup truck that is parked in his driveway, and says that at 62 years old, it still gets 25 miles to the gallon and makes it up the steep hill in the winter.

Whether it be continuing to drive the classic pickup, or choosing beautiful lumber from which to build a house, or making decisions about electrical power, John believes in responsible resource use.

“An inescapable fact of power generation in Vermont is that the amount of energy that arrives at our customer’s meter represents only 25% of the original energy content that was required to produce it,” says John. “The remaining 75% is lost in the inefficiencies of power plants and transmission losses.”

John believes that the greatest opportunities for cost savings for VEC Members is in the potential provided by conservation measures. “A metered kilowatt hour saved by our members actually represents 4 kilowatts of energy that is not necessary to generate,” says John.

“I challenge that all Vermont electric suppliers will face in the next two years is to establish the blend of electric power resources that will power Vermont in the foreseeable future,” he says. “Indeed, electric suppliers have the responsibility of ensuring that there will continue to be reliable sources of energy for succeeding generations that will not cause harm to the populations they serve.”

John says that the decisions made over the next year will be critical to Vermonters over the next generation. “I’m looking forward to being one of the decision makers to decide the blend of power that the Co-op will participate in and to work with others to make sound decisions in that realm.”

As a builder, John says that normally when he sits still for more than five minutes, he falls asleep. Not so, he says, when he attends VEC Board Meetings. “I get increasingly excited at the meetings because everyone impresses me so much.”

“I think we have a fine Board of Directors, and the wealth of knowledge and experience possessed by the Board is tremendous,” John says.

One of the first decisions for John as a Board Member will be deciding which committees he will serve on. Rather than blindly choosing, he has decided to take the time to visit each Committee, and then make a decision based on where he feels he can best serve the Co-op and its Members.

John, who has been a member of the Co-op since 1973, says he has always appreciated the service he’s been given. His interactions over the years with the Co-op have always been positive, and he hopes to be able to use his own hands-on approach to serve the Membership.

“I appreciated the efforts in the 1980’s by Bob Northrop to stave off bankruptcy,” says John. “He believed in the Co-op when not many other people did. I take his example as a guidepost for myself.”

Visit us on the web at www.vermontelectric.coop

Vehicles & Generator for Sale

VEC has for sale vehicles and equipment and will accept sealed bids until 4:00 pm, October 16, 2009.

Please submit all bids to the attention of Jane Tallman, Purchasing Agent at Vermont Electric Coop, 42 Wescorom Road, Johnson Vermont 05656.

All vehicles advertised may have high mileage and may be in need of mechanical / body work unless otherwise noted. Mileage is estimated at time of sale.

Vehicles for sale:

• 2000 Ford Ranger, (82,Vin #68653), Four wheel drive, Mileage is 122,877+.

• 2001 Ford F-250, (85,Vin #30119), Four wheel drive, Mileage is 184,790+.

• 2000 Ford F-250, (120,Vin #07850), Four wheel drive, Mileage is 187,433+.

• 1997 Ford F-250, (1030,Vin #76377), Four wheel drive, Mileage is 145,547+.

• 2001 Ford F-250, (10601,Vin #18328), Four wheel drive, Mileage is 154,547+.

Generator for sale:

Winco single phase PTO driven generator model 25PTOC-3/F, 25000 watt unit mounted on small utility trailer, generator includes 200a Runkel transfer switch attached

Vehicles and/or Equipment can be seen by appointment at the VEC Johnson Warehouse by contacting Mark Bennett at 730-1144.
Vermont Electric Co-op

The Seven Cooperative Principles

Voluntary and Open Membership – Cooperatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political, or religious discrimination.

Democratic Member Control – Cooperatives are democratic organizations controlled by their members, who actively participate in setting policies and making decisions. The elected representatives are accountable to the membership. In primary cooperatives, members have equal voting rights (one member, one vote) and cooperatives at other levels are organized in a democratic manner.

Members’ Economic Participation – Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership.

Autonomy and Independence – Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

Education, Training, and Information – Cooperatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their cooperatives. They inform the general public, particularly young people and opinion leaders, about the nature and benefits of cooperation.

Cooperation Among Cooperatives – Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional, and international structures.

Concern for Community – While focusing on member needs, cooperatives work for the sustainable development of their communities through policies accepted by their members.

October is National Cooperative Month

Each October, Cooperatives across America celebrate the role, accomplishments, and contributions of our nation’s cooperatives. Vermont Electric Cooperative, Inc. (VEC) has been serving members in rural Vermont since 1938. VEC is one of 40,000 cooperative businesses serving more than 130 million people throughout the United States. As a member-owned not-for-profit organization, VEC puts the needs of its members first and foremost. Unlike for-profit businesses which work for shareholders, each cooperative customer is also a member, and has a voice in determining the direction of the organization.

As a Cooperative, VEC is owned by its customers – our members. Each person or entity who receives electricity from VEC automatically becomes a member-owner of VEC. Cooperatives are democratic in nature, and each member has an equal vote on matters such as Bylaws, investing in long term power contracts, and electing Directors to the Board. VEC is currently governed by a 13 member Board of Directors that is elected by members within their geographical district. The Board sets policy and provides general direction for VEC’s operations.

Today, VEC serves 34,000 members and 37,279 retail meters in 74 towns in the northern part of the state. The cooperative difference defines both VEC and as an organization and what can be achieved by putting members’ interests first. VEC looks forward to many more years of providing our members with outstanding service in the cooperative way.

You Cooperative’s History

At its origination, VEC was founded to serve residents in parts of rural Lamoille County who had been bypassed by investor-owned utilities. Early service extensions continued into Chittenden and Franklin counties. From 1940 through 1960, our service territory continued to expand in Northern Vermont through the construction of new lines and the acquisition of small private companies.

VEC expanded its territory into Southern Vermont through a merger with Halifax Electric Cooperative. In 1970, VEC acquired the International Electric Company serving the Derby Line area along the Canadian border.

VEC completed the acquisition of Citizens Communications Company’s Vermont Electric Division on April 1, 2004, which more than doubled our membership. Recognizing that members in the southern district could be more efficiently served by another distributor utility, we already serving much of this territory, VEC sold its Southern District in the Windham and Windsor counties to Central Vermont Public Service (CVPS). This district served approximately 2,770 members. This district also included twelve members in three towns on the Massachusetts/Vermont border, which VEC sold to Western Massachusetts Electric Company (WMECO) on December 8, 2006.

VEC continues to focus on improving our system performance. An increase in capital funding is allowing us to focus our efforts on critical system improvements including higher levels of vegetation management, substation and line replacements, and maintenance activities.

VEC recently completed construction of a new transmission substation in Enosburg, which will improve reliability for VEC members between Highgate and Newport, as well as transmission reliability for the Village of Enosburg. Other capital projects approved by the membership at the 2009 Annual Meeting include upgrades to the Derby Transmission Line and the Taft Corners Substation.

What are Cooperatives?

Cooperatives are Businesses Cooperatives are businesses that—

• are owned and democratically controlled by their members— the people who use the co-op’s services or buy its goods—not by investors.

• return surplus revenues (income over expenses and investment) to members proportionate to their use of the cooperative, not proportionate to their ownership share.

• are motivated by service to their members, not by profit.

Cooperatives Coming Together

On September 8-10, Vermont was host to the National Rural Electric Cooperative Association (NRECA) Regional 1 and 4 Conference. Representatives of rural electric co-ops from Maine to West Virginia; including Vermont Electric Cooperative, Inc. and Washington Electric Cooperative, gathered in Burlington, Vermont to share experiences and discuss the tough choices facing cooperatives as they work to keep electricity safe, reliable and affordable.

More than 1,500 electric co-op officials from 17 states convened to get the latest information on climate change legislation, energy efficiency, and developments in the electric utility industry. Attendees were locally-elected directors and key staff from 140 cooperative electric utilities serving more than 7.9 million people.

The Regional meetings continue the cooperatives’ grassroots policymaking process, which begins at the local co-op level and culminates at NRECA’s Annual Meeting, to be held in Atlanta, Georgia, in February of 2010.

The National Rural Electric Co-operative Association (NRECA) is the national association of more than 900 consumer-owned cooperative electric utilities that provide electric power to 42 million people in 47 states. Each of the 47 member states is represented by a director on the NRECA National Board, and the states are grouped into 10 regions.

Concern for Community: The Seventh Cooperative Principle

Commitment to both the communities and members we serve has been at the heart of Vermont Electric Cooperative’s core values since VEC was founded in 1938. Vermont Electric Cooperatives strive to help better our communities by providing community, economic and educational opportunities to our members.

Many Co-op employees have a long history of giving back to the communities they live and work in. Whether as little league coaches, volunteer firefighters, Cub Scout leaders or as Board members for other companies, VEC employees are involved in civic organizations throughout communities in northern Vermont. In addition, VEC employees team together to participate in turkey drives, adopting families at the holidays and participating in local blood drives.

Get real time outage information at www.vermontelectric.coop
The need is great and blood saves lives...

Prince October 28, 2008, VEC partnered with Johnson State College (JSC) to host a fall Red Cross Blood drive. While the drive was held at the JSC campus, several employees from VEC participated by promoting the drive, volunteering time, and donating blood. Members of the community generously contributed blood, resulting in a total of 124 productive units of blood being collected and 35 first-time donors participating.

VEC employees felt so good about the accomplishment of the October blood drive that we co-sponsored a second drive with JSC on March 26, 2009. Volunteers at the spring drive witnessed 122 individuals present to donate, and the Red Cross was able to obtain 106 productive units of blood.

The collective efforts of VEC employees and JSC staff and students resulted in 230 productive units of blood collected at Johnson State College during the 2008-09 school year. The American Red Cross said that this was the most successful year the Red Cross has experienced at the college since 1997-1998.

Since each unit of blood has the potential to help save three lives, you can bet that VEC employees are committed to volunteering at the 2009 Fall Community Blood Drive being sponsored once again by VEC and JSC.

"Message," cont. from pg. 1

As noted by Michael T. Burr in Public Utilities Fortnightly magazine, September 2009, "Utilities need regulators to make them whole for lost revenues, and also to finance the industry's transition to a greener operating model. The result will be rising rates—an unpopular move in any economy, and a political nightmare during a recession. Continued strong performance will depend on balancing customers' need for clean and affordable energy supplies against utilities' need for low-cost capital."

VEC is identifying strategies that will promote financial balance by allowing us to plan for and respond to economic volatility promptly and effectively. One option is to seek alternative regulation with the Vermont Public Service Board (PSB). This would enable VEC to adjust rates either up or down on a regular and more frequent basis (VT's two largest utilities are currently operating under alternative regulation plans) without undergoing costly rate cases. Such a plan would still be subject to the approval, oversight, and scrutiny of the PSB, and would require approval of the VEC membership.

Another option being explored is to move to annual rate cases that reflect the most recent economic conditions and needs. Instead of seeking larger increases two to three years, smaller increases would be sought on a yearly basis to minimize the impact of rate increases to VEC members.

VEC has made significant strides in improving reliability and member satisfaction during the past few years. By taking a fiscally responsible and aggressive response to the current financial challenge, I am confident that this Cooperative will continue to meet the energy needs of Northern Vermont.

I will keep you informed about VEC's financial status in the coming months.

Sincerely,

Dave Hallquist, CEO

VEC Exceeds Service Standards

VEC is pleased to report that it has exceeded all Service Quality Reliability Plan (SQRP) standards for the year ending June 30, 2009. Under the oversight of the Vermont Public Service Department (VPDS), VEC measures performance in 17 areas related to service, quality, and reliability. A few examples of items that are monitored include billing accuracy, duration and frequency of outages, and on-time delivery of services.

In addition to setting standards for achievement, SQRP also provides service guarantees for VEC members. For instance, VEC guarantees that line crews will be on time for scheduled appointments. If a crew does not show up within a two-hour window of a scheduled appointment with a member, a $5 credit is issued to the member.

“Tackling a fiscally responsible and aggressive response to the current financial challenge, I am confident that this Cooperative will continue to meet the energy needs of Northern Vermont.”

Your furnace will run for a shorter time and use far less energy to heat up a cool house than it would if you kept the house warm all day. So, yes, it’s a good idea to follow your son’s suggestion. In fact, make it easy by installing a programmable thermostat. You can program it to lower the house temperature when you leave in the morning and when you go to bed. Then, it’ll have the house warm for you in the morning and when you get home. Sorry I couldn’t side with you on this, but I’m glad you’ll be saving energy and staying warm this winter.

-Kathleen for The Home Team

Q: My teenage son says we should turn down the thermostat when we’re at school/work, to lower the heat bill. But I’ve always heard that this costs you more because it makes the furnace work harder when you turn the heat back up. My son would love to prove the old man wrong (again), so I hope you’ll settle this in your column.

A: Glad to – just don’t blame the messenger! Your son’s right. To understand why, imagine keeping a pot of water boiling on the stove top all day because you want to make pasta for dinner. You get the picture.

Your furnace will run for a shorter time and use far less energy to heat up a cool house than it would if you kept the house warm all day. So, yes, it’s a good idea to follow your son’s suggestion. In fact, make it easy by installing a programmable thermostat. You can program it to lower the house temperature when you leave in the morning and when you go to bed. Then, it’ll have the house warm for you in the morning and when you get home. Sorry I couldn’t side with you on this, but I’m glad you’ll be saving energy and staying warm this winter.

-Kathleen for The Home Team

Q: What type of insulation would you recommend using on pipes?

A: You’re smart to insulate your pipes. In warm weather, insulation keeps cold-water pipes from sweating. In cold weather it helps reduce heat loss from hot-water piping and may just help you avoid frozen pipes as well.

Insulation comes in a number of forms, but the best and, by far, the easiest to use is a closed-cell foam insulation which generally comes packaged in three foot lengths. Choose the right size for the pipe diameter. These slip-on pipe jackets are easy to install and cover the entire pipe surface, even when bent around corners. Tape the ends where the pieces meet using electrical tape.

- The Home Team

Go paperless at www.vermontelectric.coop

Save time, money and energy with eBill!
System Performance

As of August 31st, VEC members have experienced 49% fewer outages than last year at this time. In 2009, VEC increased its capital improvement budget by nearly 60%. While the calm weather we’ve had may have contributed in part, the capital upgrades and preventative maintenance are largely responsible for this encouraging news.

On average, each VEC member has experienced 1.56 outages in 2009, compared with 3+ outages per member during the same time last year.

Tree Trimming

VEC is on schedule with its 2009 clearing cycle. Crews began applying selective applications of herbicide on rights-of-way in late August. The introduction of this efficient clearing method will be critical in improving future reliability and keeping vegetation management costs reasonable.

In November 2006, VEC averaged 49 tree outages per month. Today, this number has decreased to 34; a 50% reduction in two and half years. This improvement has come at a cost, requiring VEC to increase its vegetation management budget each year since 2005.

Recognizing that VEC still has room for improvement, the VT Public Service Board has requested that VEC file a work plan that will guarantee that we will trim all 2,358 miles of distribution line at least once every eight to ten years. This work plan provides the solid foundation for improvement, and is nearly complete. It will be filed on or before the September 15th deadline.

Capital Projects

In 2009, VEC completed some very important capital projects. Each project is prioritized considering public and worker safety, reliability and cost to maintain. Critical projects that met the criteria were the replacement of the Enosburg Substation, the Hinesburg substation upgrade and the Taft Corners substation project which replaced the Creamery Road substation. Each of these stations was successfully commissioned this summer and each will do their part in improving system performance and reducing costly repairs.

Other capital projects underway now include the replacement of the East Hill substation in Eden (which will allow for the retirement of the pole mounted substation located on Mill Village Road in Albany), the relocation of a section of 46 kV transmission line in Island Pond, Pond, Eden, Johnson, Cambridge, and South Herosubstations. Each of these upgrades incrementally enhances system performance and efficiency.

Major capital projects planned for next year include the replacement of 3.5 miles of steel tower transmission line between Derby and West Charleston, the construction of a new 46 kV substation just east of the RT 105 pass over Jay Mountain and the replacement of the Pleasant Valley substation on Lower Pleasant Valley Road in Cambridge.

Smart Grid

VEC continues to lead the State in the implementation of Automatic Meter Infrastructure (AMI). In 2009, VEC installed AMI meters and the associated substation packages in the areas of Eden, Hyde Park, Montgomery, Sheldon, Fairfax, Fairfield and others. The next area to come on line is Williston. The substation package will be installed and ready for commissioning in October, followed by meter replacements at each individual account. VEC currently has two-way communications with approximately 80% of all meters.

Continuing Improvement

VEC has developed important measures to ensure that we are continually improving and striving to increase member satisfaction. In addition to the standard reliability measures of frequency and duration, the Engineering and Operations side of the business has developed the following measures that are reported to the VEC Board of Directors each month: Lead Time for New Services and Line Extensions (31 Days); Total System Losses (9.0%); Line Crew Productivity (7.7 Hours per Day “Out of Office”); Percentage of Line Crew hours worked on Capital Improvements vs. Operating and Maintenance (33%); and the most outages experienced by a single member in the past twelve months (16).

These critical measures are all easily captured from our new accounting and outage management systems and are critical in measuring our strengths and weaknesses.

Outage Communications

VEC would like to remind everyone that there is now real-time outage data available on our web-site, www.vermontelectric.coop. In addition to listing current outages, you can view the outages, their causes during the past forty-eight hours, and messages regarding weather threats and restoration estimates. If you have access to the Internet, we encourage you to utilize this communication tool.

Construction Corner

By Harry Abendroth, Mgr. Regulatory & Planning Engineer

Engineering and environmental assessment work continues for replacement of 5.5 miles of transmission line in the towns of Derby and Charleston. The existing transmission line was constructed in the early 1920s and must be rebuilt so that VEC can continue to provide reliable service to the area residents. VEC’s plans include replacing the existing steel lattice towers with single wood pole structures.

VEC has retained the services of the University of Vermont (UVM) to perform archæological assessments required for regulatory approval to proceed with a project. If you have any questions about an individual working in the right of way near your property, please call the VEC Control Center at (802) 730-1219.

Construction of a new substation in the Taft Corner area of Williston has been completed. In mid-September, VEC transferred the electric load presently served by the substation on Old Creamery Road in Williston to the new and improved substation. VEC will remove the existing substation on Old Creamery Road as soon as the necessary regulatory approvals are obtained.

Jeffery Wright, COO

Average Outage Frequency

For the first time in recent VEC history, the average twelve month outage frequency has dropped below the VT Public Service Board’s goal of 2.5 Outages per Member. This long-term improvement trend has resulted in a 25% improvement in outage frequency.

Co-op Life

Co-op Update by Jeffery Wright, Chief Operating Officer

Recalling that VEC stored 1,800 gallons of “smart grid” equipment automation and infrastructure (AMI). In 2009, VEC increased its capital improvement and each will do their part in improving system performance and reducing costly repairs.

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### VERMONT ELECTRIC COOPERATIVE RATES EFFECTIVE JANUARY 1, 2009

#### Residential – Rate 1

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1 Multiple Residential Meter rates effective February 1, 2009

#### Residential – Time of Use Rate 1.1

<table>
<thead>
<tr>
<th>Rate</th>
<th>On-Peak Usage kWh</th>
<th>Off-Peak Usage kWh</th>
<th>Customer Charge per meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Peak Usage kWh</td>
<td>$0.18478</td>
<td>$0.13326</td>
<td>$16.08</td>
</tr>
<tr>
<td>Off-Peak Usage kWh</td>
<td>$0.08465</td>
<td>$0.08465</td>
<td>$5.25</td>
</tr>
</tbody>
</table>

#### General Service – Rate 2

<table>
<thead>
<tr>
<th>Rate</th>
<th>On-Peak Usage kWh</th>
<th>Off-Peak Usage kWh</th>
<th>Customer Charge per meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Peak Usage kWh</td>
<td>$0.14730</td>
<td>$0.14730</td>
<td>$16.08</td>
</tr>
<tr>
<td>Off-Peak Usage kWh</td>
<td>$0.08465</td>
<td>$0.08465</td>
<td>$5.25</td>
</tr>
</tbody>
</table>

#### General Service-Time of Use Rate 2.1

<table>
<thead>
<tr>
<th>Rate</th>
<th>On-Peak Usage kWh</th>
<th>Off-Peak Usage kWh</th>
<th>Customer Charge per meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Peak Usage kWh</td>
<td>$0.16372</td>
<td>$0.16372</td>
<td>$21.96</td>
</tr>
<tr>
<td>Off-Peak Usage kWh</td>
<td>$0.11220</td>
<td>$0.11220</td>
<td>$17.05</td>
</tr>
</tbody>
</table>

#### Industrial – Rate 3

<table>
<thead>
<tr>
<th>Rate</th>
<th>Distribution kWh all kWh</th>
<th>Distribution KW- Firm</th>
<th>Distribution KW - Interrupt</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Peak Usage kWh</td>
<td>$0.13120</td>
<td>$18.57</td>
<td>$15.24</td>
</tr>
<tr>
<td>Off-Peak Usage kWh</td>
<td>$0.08465</td>
<td>$11.25</td>
<td>$7.92</td>
</tr>
</tbody>
</table>

#### Fees (all year)

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial/New Service</td>
<td>$18.00</td>
</tr>
<tr>
<td>Disconnect/Reconnect</td>
<td>$25.00</td>
</tr>
<tr>
<td>Reconnect after hours</td>
<td>$56.00</td>
</tr>
<tr>
<td>Suspension of service initial</td>
<td>$18.00</td>
</tr>
<tr>
<td>Suspension of service reconnect</td>
<td>$25.00</td>
</tr>
<tr>
<td>Continuous service</td>
<td>$10.00</td>
</tr>
<tr>
<td>Bad check charge</td>
<td>$10.00</td>
</tr>
</tbody>
</table>

#### Streetlights (all year)

<table>
<thead>
<tr>
<th>Lumens or Watts</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000 Lumen or 100W</td>
<td>$7.23</td>
</tr>
<tr>
<td>4,000 Lumen or 200W</td>
<td>$16.50</td>
</tr>
<tr>
<td>10,000 Lumen or 500W</td>
<td>$22.71</td>
</tr>
<tr>
<td>20,000 Lumen MV &gt; 250W</td>
<td>$28.72</td>
</tr>
<tr>
<td>24,000 Lumen HPS, 250W</td>
<td>$28.20</td>
</tr>
<tr>
<td>44,000 Lumen HPS, 400W</td>
<td>$43.10</td>
</tr>
</tbody>
</table>

### What is “wattWATCHERS?”

VEC wattWATCHERS is a new web-based tool that will help members with smart meters to analyze and manage their electric consumption. Users can toggle between graphs that display hourly or daily consumption over a period of up to 90 days.

Alerts can be set by users to send email notifications when consumption exceeds predetermined levels. There is also a feature that allows users to add personalized comments to their graphs.

This way, consumers can keep track of factors that might cause their electricity to peak.

VEC wattWATCHERS was developed internally by VEC’s IT team. After seeing software applications enter the market with price tags of $50K and up, IT Manager, Jacek Szamrej, knew that VEC had the talent to create a similar tool. Along with IT Specialist, Fred Wiesman, and Member Service Manager, Sue Bernier, the team developed software and a graphic interface that capitalizes on VEC’s smart grid technology. A group of employees then tested wattWATCHERS and provided feedback to make it member-friendly.

“Many people are surprised to hear about the high level of technical expertise here at VEC,” said Dave Hallquist, CEO. “We are proud to have employees that have the skills and initiative to develop sophisticated smart grid applications for our members.”

With more than 29,000 smart meters installed, VEC leads the state of Vermont in smart grid deployment. VEC wattWATCHERS is just one example of how technology can be utilized to increase efficiency and empower members and utilities to better manage electricity consumption.

To learn more about VEC wattWATCHERS, go to www.vermontelectric.coop.
**Home Power Generation – Series Four of Four**

**Small Scale (Micro) Hydro**

by Dave Hallquist, CEO

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If you are lucky enough to have a good stream on your property, and if you are rather handy, micro-hydro power could be an excellent source of renewable power for you. More than likely, if you live in Vermont, that stream is located on a hillside, which means that it will likely meet the height required to provide you with a good steady flow that will provide you with the power needed to run your home. The limitation that most Vermonters run into is the amount of year-round flow that is required to dependably produce power; for most, the flow throughout the year is inconsistent.

A micro-hydro installation could cost a homeowner at least twenty thousand dollars for an entry-level system, assuming that the construction of the project could all be done by the homeowner. This system would be a net-metered system. Net metering is a Vermont policy for retail customers who own (generally small) renewable energy facilities, such as wind, solar power, or home fuel cells. "Net", in this context, is defined as "what remains after deductions" — in this case, the deduction of any energy outflows from metered energy inflows. Under net metering, the system owner receives credit for the electricity they generate, which is deducted from their monthly kWh usage. Vermont also allows group net metering, to enable a group of consumer to invest in a project and participate in the savings together.

While a net-metered system is the least expensive way to construct a system, the drawback is that it will not provide power during an outage. Many users would like the confidence of a back-up electric system, however it adds significant cost to the project. In order to provide power during outages, enough battery storage has to be added to ensure dependable power during times when the usage in the home exceeds the capacity of the generation. This also requires the batteries to be installed in a safe and vented location.

A micro-hydro installation consists of the following components:

- **Intake** – this is the place where the waterway meets the pipe that feeds the water-wheel. The intake is covered by a screen or grate so that debris does not enter the system. Debris can damage the system and reduce its output and operating life. The intake is sometimes set in a small dam, which can be made from logs or concrete, which will form a mill pond. Often, hydro installations will include a sluice and sluice gate. The sluice is the small waterway that feeds the intake, and the sluice gate is used to close off the waterway so that the intake can easily be cleaned. A sluice gate can be a piece of plywood set between rails so that it can be raised and lowered to control the flow.

- **Penstock** – this is the pipe that is used to direct water to the water wheel. Typical penstock is PVC pipe from four inches to one foot in radius. The pipe needs to be anchored securely and at regular intervals, often using wooden frames.

- **Vent** – often a vent is required where the penstock elbow meets the waterwheel. The vent is simply a vertical pipe that is higher than the intake, and won’t be afraid to maintain it.

- **Tailrace** – this is the place where the water leaves the water wheel because these work best in systems with a lot of height and low flows.

Generator (alternator) – The generator is the electrical component that is connected to the axle on the waterwheel. This spinning axle will turn the generator, creating power.

Inverter and Interconnect – the inverter and interconnect converts the electrical output into power that can be placed onto the electric grid. Below is the formula for calculation the power output of a system.

\[ P = \frac{h \times r \times g \times k}{51974}; \]

Where \( P \) is Power in kilowatts, \( h \) is height in feet, \( r \) is flow rate in feet per minute, \( g \) is acceleration due to gravity of 32 ft/s^2, and \( k \) is a coefficient of efficiency ranging from 0 to 1. Typical system efficiency for a micro-hydro system is about 15%. Efficiency can be higher with larger and customized turbines.

Home power systems are not for the faint of heart. The system requires consistent and periodic maintenance. The waterwheel needs to be disassembled, cleaned, and greased annually (usually right after spring run-off), and the intake needs to be cleaned weekly. In addition, as we all know, the Vermont weather and wildlife can be full of surprises! The best installation is one that you are able to do yourself. Once you have installed a system, you will thoroughly understand it, and won’t be afraid to maintain it. You will also have the pride of knowing that you are powering your house from a clean, renewable source, and reducing your monthly utility bill as an aside. There are plenty of resources on the web to help you out. Go to Google and type in micro-hydro and home hydro power and go with your own flow!

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**Safety Tip from VEC**

Stay Clear!

A downed power line may not be a dead line. It could cause serious injury or death.

**FOLLOW THESE TIPS FROM YOU ELECTRIC COOPERATIVE TO STAY SAFE:**

- Assume all power lines are energized and dangerous. Even lines that are de-energized could become energized at any time.
- Never touch a downed power line! And never touch a person or object that is touching a power line.
- If someone is injured as a result of contact with electric current, do not try to assist him or her. You could be injured or killed. Call 911.
- If a power line falls across your vehicle while you are in it, stay inside until help arrives.
- Call 911 immediately to report a downed power line. Then call your electric cooperative.

Call VEC at 1-800-832-2667

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It is important to notify your electric utility if you are planning to install or already have installed home generation such as wind, solar or hydro.
Inside Co-op Life Fall 2009

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Visit our new and improved website at www.vermontelectric.coop

Co-op Life
is published quarterly by Vermont Electric Cooperative
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VEC is part of the alliance working to advance and support the principles of cooperatives in Vermont.
www.veccoop.org