Turning Cow Manure into Electricity at Chaput Family Farms

By Dave Lahar, Key Accounts Manager

Perseverance pays off! When Reg and Michael Chaput, coop members and owner-operators of Chaput Family Farms located in North Troy decided to turn cow manure into electricity back in 2007, they probably had less of an understanding of what it would take, than they do today.

On-line for a little over a month, the Chaput’s methane digester at full capacity will provide enough power for nearly 250 homes. But the benefits for Chaput Family Farms are not limited to the energy generated and sold. “This project was beneficial on so many levels for our dairy operation,” said Reg Chaput. “In addition to the environmental benefits of greatly reducing the release of methane gases into the atmosphere and creating a clean energy to power the grid, we will also be able to reduce the odor associated with the spreading of liquid manure, which keeps us in good standing with our neighbors.”

The Chaputs are hoping the digester will offer a stable source of income to the farm which has weathered the volatility of milk prices for more than thirty years. Construction is not inexpensive, but with the help of grants from the USDA, the Vermont Clean Energy Development Fund (CEDF), Central Vermont Public Service (CVPS) Renewable Development Fund and the Vermont Agency of Agriculture, this project went from an idea to reality.

“The economic benefits will also be substantial with this project,” said Chaput. “With the grants we received and with the help of two low interest loans made available through the USDA and the CEDF, the pay back on this project will have made it a rather wise investment.” Additional benefits include using solids that are separated out after the digester has processed the methane gas, as bedding for the cows. See “Chaput” continued on page 4

Reflections...

“Marshall Hodgeman recently presented his parents with a new electric washer…. Marshall was so delighted with the washer, that before Mrs. Hodgeman had an opportunity to try it out on the weekly wash, he had almost worn it out demonstrating it to interested neighbors. A halt has been called on demonstrating, in order that the Hodgeman may have clean clothes.”

Published in August 1939 in Around the Project (VEC’s monthly newsletter).

“What are the responsibilities of members? The members, as owners are the controlling body. By their vote, they can approve or disapprove policies and they have the right and duty to elect a capable and public-spirited board of directors or trustees. As a member, you should make every effort to come to all members’ meetings and to vote on all matters which the members have a right to decide.”

Published in January 1940 in Around the Project (VEC’s monthly newsletter).

“One reason the farmer is economically depressed more than industry is that he has less mechanical power working for him. In a highly industrialized society, the farmer still depends in too large a degree upon manual labor. His brawny back is his power plant. Admirable as brawn is, it cannot compete with electric motors.”

Feb. 18, 1939, The Cooperative Builder

“Just a few words to tell you how we enjoy our lights. I don’t know how we got along without them. We now have a refrigerator, washing machine, radio, flatron, table lamp, floor lamp and toaster. We will have more later.”

--J. J. Sinon, January 1942

“Just thought I would let you know that I have installed a 1 HP motor for my milking machine and that Mrs. Nyes has a new electric sewing machine. Nothing like electricity.”

--K. L. Nye, January 1942

“We have a small farm with only 10 cows but besides the lights we have a new cooling unit, an electric washing machine, radio, toaster, flatiron and incubator. The meter is running up some now, but we would not like to go back to oil, gas and ice even if the bill seems too high.”

--L. L. Monteleth, North Troy, August 1942
Spotlight on Director: Craig Kneeland of Eden Mills Western Zone - Director at Large

Craig Kneeland of Eden Mills, Western Zone - Director at Large.

Highers Transmission Costs Expected to Drive Rate Increase for VEC

By Michael Bursell, CFO

Skyrocketing transmission costs in New England will drive VEC to request approval for a 2011 rate increase. VEC officials project that an increase of approximately 5% will be needed. Transmission costs are expected to increase by 29 percent or nearly $1.9 million next year. That represents about 3% of the total projected rate increase. Other contributing factors include increases in property taxes, depreciation and distribution services, and infrastructure reliability improvements. With the increases in transmission and other uncontrollable costs, VEC expects to file a request for an increase in rates by November 15, 2010.

Transmission lines are the backbone of the electrical grid that allow power to move from the generation source to the local distribution utility's lines to serve the end user – the consumer. Minimum reliability requirements for transmission lines have increased significantly since the U.S. blackout of August 14, 2003, which affected over 50 million people. As a result, the costs of these transmission lines throughout the nation are expected to receive these new minimum reliability requirements are met. Any transmission system not meeting the new minimum requirements can be assessed hefty financial penalties.

To ensure system-wide reliability, every state in New England pays a proportionate share of all New England regional transmission reliability projects, based on its percentage of the total New England electrical load. Vermont represents about four percent of New England's electrical load. These significant investments in the regional transmission infrastructure to meet stricter Federal reliability requirements have impacted all Vermont utilities. In turn, other New England states are investing proportionately in Vermont's transmission reliability upgrades.

VEC presently operates very efficient and ranks as one of the top Vermont utilities in the number of customers served per employee, despite having one of the most rural electrical systems. Additionally, we have met or exceeded very high customer service standards such as how quickly member calls are answered, billing accuracy and system reliability.

In 2009, faced with nearly a $23m projected budget shortfall, VEC took swift action and implemented a financial contingency plan that incorporated operational changes that resulted in significant spending reductions – including a wage freeze for non-union and union employees alike, as well as, new income opportunities to mitigate the revenue shortfall. As a result, VEC was able to keep last year's rate increase under 2 percent, at a time when several Vermont utilities filed for substantially higher increases.

As a member-owned cooperative, we are working hard to mitigate the financial impact to our members without compromising our commitment and obligation to provide our customers with safe and reliable service.

Scorecards & Surveys

VEC measures and reports to state regulators on a quarterly basis about how we perform on a range of service, quality and reliability standards specific to the electric utility industry in Vermont. The Coop tracks both the average number of interruptions members experience during a year, and the average duration of outages. Due to smart meter installations, infrastructure improvements, and a more rigorous and rigorous way of clearing program, VEC has exceeded targets in these areas.

Member Surveys

Since 2005, the NRECA (National Rural Electric Cooperative Association) has conducted annual telephone surveys to assess VEC member satisfaction. The 2010 survey was completed in June with participation from 475 randomly selected residential and commercial members who spent approximately 10 minutes providing feedback on key drivers of satisfaction including member service, electric service and the cost of electricity.

Overall satisfaction of VEC members has remained good according to the 2010 Member Survey. While VEC employees rank highly for being courteous, understanding and helpful, members are satisfied with the fair and reasonable rates and indicate that VEC should do more to help members keep bills as low as possible.

“The survey is an invaluable tool that helps us to identify areas in which VEC is meeting expectations. More importantly, it gives us a clear indication of what we can be doing better,” explained Member Service Manager Sue Bernier. “Moving forward, members can expect to see increased support to help them use electricity more efficiently. By continuing to take steps that increase productivity and keep operating costs as low as possible, we are working to minimize future rate increases,” continued Bernier.

Survey participants were also asked to evaluate other items such as the importance of using renewable energy sources. More than three-quarters placed high importance on VEC using hydro, wind, or solar to provide environmentally friendly green power. On the other hand, when asked about distributing energy generated by nuclear power, the results were mixed with forty-one percent in favor and thirty-six percent opposed.

Full survey results are available upon request or can be accessed on VEC's website at www.vermontelectricco-op.org under News Center/Reports.
**Vermont Yankee Status**

By Dave Hallquist, CEO

Energy's nuclear power plant in Vernon, Vermont is scheduled to be closed in March, 2012, unless a license extension is granted. The Vermont Electric Cooperative, Vermont Legislature and the Vermont Public Service Board. On February 24, 2010, the Vermont Senate voted 26 to 4 to put the PSB relicensing approval process on hold (indefinitely). Unless the chamber reverses itself, it will be the first time in more than 20 years that the public or its elected representatives have decided to close a reactor.

While VEC typically supports Vermont's elected representatives and their decision-making process with regard to economic and policy issues, VEC has remained impartial and reserved on the issue of the relicensing of Vermont Yankee. Surveys show that VEC members are split and quite passionate in terms of their support or opposition. VEC, as a cooperative, ultimately represents all the members which means it will continue to remain neutral on this issue.

As you know, the issues surrounding Vermont Yankee received a lot of attention last year. However, there are two key points that have not yet been clearly discussed: the carbon footprint of the replacement power, and the added costs due to transmission requirements should the plant be closed.

**Replacement Power**

Importantly, VEC does not currently depend on Vermont Yankee power as much as other utilities. For the next five years, purchasing replacement power from the market should not be a problem in terms of cost. Due to the current serious economic downturn, electricity is relatively inexpensive when compared to the present offer from Entergy.

However, this could lead to a power portfolio for Vermont with a greater carbon footprint, because power purchased from the New England market is typically generated by natural gas, which contributes carbon emissions. While nuclear power has a minimal carbon footprint, natural gas is a mined carbon which means carbon is pulled from the earth and released into the atmosphere. It contributes about one half of the coal-fired generation, and about three quarters the carbon of oil-fired generation.

Historically, contracts with Vermont Yankee and Hydro-Quebec have enabled Vermont to have the lowest carbon footprint amongst all the states. VEC recently negotiated a new contract with Hydro-Quebec that begins in November of 2012, which replaces two-thirds of the expired portion of our existing contract. Other utilities will also buy less power from Hydro-Quebec under the new contract. This will further drive the need for replacement power, adding to the threat of a greater carbon footprint in Vermont.

**Transmission Costs**

Regarding the increased costs of transmission, the Independent System Operator for New England (ISO-NE) is the neutral system operator for the New England transmission grid. ISO-NE is directed by the Federal Energy Regulatory Commission (FERC) to ensure stability of the electric grid. ISO-NE informed the Vermont utilities that closure of Vermont Yankee may require additional and costly transmission construction in and around Vermont. It is foreseeable that Vermont ratepayers will bear the costs of that additional construction. In addition, there may need to be natural gas generation plants built in and around Chittenden County in order to provide the stability required to ensure a safe and reliable operation of the transmission grid. Vermont utilities, including VEC, have asked ISO-NE to complete a detailed impact study in order to fully assess the rate impact of maintaining a reliable grid without Vermont Yankee. We hope that more information will be available in time for this year's legislative session.

**Conclusion**

This article is not meant to influence the Vermont Yankee closure decision in any way. At VEC, our goal is simply to provide you with honest, accurate information as it becomes available. VEC is working diligently to find replacement power that is as clean as possible. VEC is partnering with Green Mountain Power to construct the Kingdom Community Wind project and has contracted with First Wind to take half of the output of the Sheffield wind project. At the same time, VEC recognizes the importance of keeping rates as low as possible. For the near term that means we will be purchasing more market power.

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**Why switch to Paperless eBilling?**

The advantages of going to Paperless eBilling are significant. VEC introduced eBill in June of 2008. Since its inception over 5,000 members are using eBill to pay their bills online. Over 40% of those members have also gone paperless. This translates to savings in time, money, and energy for members who receive and pay their bills online through a secure process with a click of the mouse.

Not only is Paperless eBilling quick, convenient and secure -- the environmental savings are far reaching. Research shows that an average American household receives 19 bills each month and pays seven of these bills by check. By choosing the paperless option for bills, statements and payments every year, the average household can:

- save 6 pounds of paper
- avoid use of 4.5 gallons of gasoline to mail bills, statements and payments
- avoid release of 63 gallons of wastewater into the environment; and
- eliminate production of 171 pounds of greenhouse emissions.

Imagine what the collective impact would be if all 34,000 VEC members switched to Paperless eBilling. Won’t you do your part and sign up today for the Paperless eBilling option?

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**Go paperless and win!**

**Go green and save green with eBill**

Sign up now at https://ebill.vermontelectric.coop and you will be entered to win!

Visit us on the web at www.vermontelectric.coop
with the highest electricity usage each month were praised and placed on the VEC honor roll. Farmers experienced increased productivity by using electric milkers and egg production was boosted through the use of brooding lights to extend daylight hours for the chickens. Homemakers saved time by using Toasters and vacuums. Towns were illuminated as the first streetlights were installed. From water pumps to refrigerators to washing machines, life in rural northern Vermont was undergoing a transformation.

By mid-1940, 287 members had joined the Coop and 111 miles of lines had been energized. Records show that members had 15 refrigerators, 63 toasters and 99 washing machines. Just one year later, the Coop boasted 671 members with 340 miles of energized lines. Today, VEC serves over 34,000 members with 2,784 miles of lines. VEC founders would be amazed to see just how many appliances a single member uses today! Seventy-two years after VEC’s inception, we continue to provide energy solutions that benefit rural Vermonters while avoiding capacity constraints of the regional electric grid. Under the direction of our member-owners, VEC continues to build a green energy portfolio by procuring and distributing electricity from generation sources that minimize negative impacts to the environment.

Chaput Family Farms

Manure to dry for cow bedding.

Chaput Family Farms

Friday, October 8th
10 am - 2 pm

HOT DOGS, HAMBURGERS, CHIPS, MILK, SODA'S

Chaput Family Farms
2473 Route 105 East
North Troy

Tour Days: Monday, Friday and Saturday

To visit the farm, please email Chaput Family Farms at cff1991@hotmail.com or Kathryn at kkantorski@vermontelectriccoop.org.

Just as our region went through a revolution in the 1930’s when the first electric lines were installed, VEC is upgrading our current electric infrastructure to meet our current and future needs. While some things have changed over the years, others remain constant. Since its inception, VEC has been run by a democratically elected board which has been chosen by VEC members. We continue to focus on providing top-notch member service and reliability, as well as, reasonable rates in a region that can be challenging to serve due to our rural nature and rugged terrain. By making regular investments to improve our infrastructure, VEC members are seeing significant improvements in reliability. By using smart grid technology, we are reducing operational costs which will help us to control the magnitude of future rate increases.

As VEC has grown, the cooperative model continues to serve us well. On behalf of the Board of Directors and VEC staff, I invite you to join us this October in celebration of National Cooperative Month. Please remember, this is your cooperative. You have a voice and a vote. Together, we can provide energy solutions for today and tomorrow to rural Vermonters, just as our founders did when they formed VEC more than seventy years ago.

Sincerely,

Thomas Bailey,
President VEC Board of Directors

In the summer of 2009, Vermont’s Sustainable Priced Energy Development Program (SPEED) was unveiled in its current form. The SPEED standard offers or “feed-in tariff” promotes in-state renewable energy fuel sources by offering premium rates for local renewable generation. For example, in the case of farm methane systems, the PSB approved a higher interim rate of 16¢ per kWh.

The concept of generating electricity from manure may sound simple - collecting methane gas in a large tank or digester, and using that gas to fuel an engine driven generator. But the equipment, hardware, monitoring and electrical interconnection are highly specialized and complex.

“VEC worked closely with the Chaputs on the interconnection process”, said Dean Denis, VEC Distribution Manager and Project Manager for the Chaput project. “It’s important for us to ensure there are no adverse impacts to our system or other VEC members’ service quality. Ultimately, the connection of the methane generator needs to be safe and reliable, with an acceptable level of power quality” added Dean.

Under the SPEED program, the utility, in this case VEC, is responsible for remote communications to and between the protective equipment on the utility grid. By expediting smart grid upgrades to VEC’s North Troy substation that serves the Chaput Farm, and by taking a creative approach to utilizing existing North Link fiber for the communication interface, VEC significantly reduced the startup costs typically associated with a project of this magnitude.

In addition to the assistance provided by several VEC employees with the project, Chaput Family Farms received technical support from Mike Raker, Ag Energy Consultants, a technical consulting provider specializing in farm methane systems. Mike has an extensive background in farm efficiency and has been a key contributor to CVPS’s “Cow Power” program.

About Chaput Family Farms:
Chaput Family Farms is a partnership of Reg and Mike Chaput. The legal partnership began in 1991 and was the result of the consolidation of four farms owned individually by Mike, Reg, and their father Leo. Today, both Mike and Reg are actively engaged in farm operations with Reg serving as the financial/administrative manager and Mike as the crop and construction manager.

Chaput Family Farms

DIGESTER TOURS

OPEN HOUSE

HAMBURGERS, CHIPS, MILK, SODA'S

Chaput Family Farms
2473 Route 105 East
North Troy

For more information or directions, please email Chaput Family Farms at cff1991@hotmail.com or Kathryn at kkantorski@vermontelectriccoop.org.

Manure Separator at Chaput Family Farm
I n the June issue of Coop Life I reported that service reliability continues to improve. I was also pleased to report that the recent grants received from the Department of Energy (DOE) and the Economic Development Agency (EDA) have enabled implementation of additional Smart Grid projects to further enhance VEC’s system reliability, without additional impact to rates. This trend continues.

VEC’s summer construction season was a busy one. Six additional substations were successfully automated, expanding the level of remote monitoring and operations coverage to approximately 60 percent of VEC’s service territory. In addition to these critical substation automation projects, we continue to install smart meters in members’ homes and businesses. At a time when many Vermont utilities are just beginning to plan their first steps toward meter automation, VEC clearly is on the leading edge of Automated Meter Infrastructure (AMI) technology. Currently, over 85 percent of VEC members are being served by smart meters.

As utilities across the nation invest in smart grid infrastructures at astonishing rates, it is important to monitor VEC’s smart grid infrastructures at astonishing meters.

VEC members are being served by smart technology. Currently, over 85 percent of VEC’s service territory is required to report annually on its System Average Interruption Frequency Index (SAIFI) to the Vermont Public Service Board (VPSB). VEC’s SAIFI measure is essentially its system reliability scorecard. During the 2009 plan year, VEC exceeded the SAIFI measures for the first time since the inception of the SQRP in 2004. VEC had an average of 2.1 outages per member, which is approximately 32 percent better than its target goal of 2.5 outages per member, per year. Currently, our SAIFI for the past twelve months is 1.71, the lowest outage frequency in the history of the Coop.

I would like to point out that while VEC’s overall outage performance has significantly improved, there are areas within VEC’s system that have experienced more outages than this data illustrates. This may come as no surprise to members in Jericho, Westford, Cambridge, Waterville, Hinesburg or some other hard to serve areas. The SAIFI index is a system wide average and therefore, it can gloss over some of the areas affected by more frequent outages. During the daily operations conference call every outage is critiqued. I want to assure you that VEC monitors service levels by circuit level, and we adjust our resources to focus on those more difficult areas. Our goal is to level system wide performance by addressing those “problem” circuits.

A common and effective response to solving a localized reliability problem is to refactor tree trimming resources. In addition to implementing several preventative maintenance programs and investing capital in our system at record rates over the last two years, VEC has enhanced our vegetation management program. Funding for vegetation management has increased to allow for the coverage of over 200 line miles per year. By implementing these strategies and tools like selective use of herbicides and work tracking software, more VEC members than ever have benefited from improved system reliability. If you have questions or concerns with our recent vegetation management activities or program goals you can call Sara Packer our System Forester at 1-800-832-2667, extension 1104.

**Project Update**

As summer slips by and winter approaches, VEC is sprinting to complete critical capital projects that will ensure system reliability when we need it the most. VEC received its Certificate of Public Good (CPG) from the VPSB for the Jay Tap Transmission Switching Station project. We will begin construction immediately following the issuance of required state and federal environmental permits. Our goal is to commission the new substation before winter weather hits. Completion of this project will significantly enhance reliability in the northern areas of our service territory.

With the installation of automated equipment, System Operations will be able to remotely monitor and control yet another VEC substation. This project brings VEC one step closer to its goal of 100% grid automation by 2013, and ensures that we deliver reliable service by staying on the leading edge of smart grid technology.

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**COO UPDATE**

by Jeffery Wright, Chief Operating Officer

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Your friends at Vermont Electric Co-op wish you a very SAFE and HEALTHY AUTUMN! Remember – Safety is a Choice!

Safety tips to help you prepare for the upcoming change of seasons:

- **Safe store warm weather tools like lawn mowers and trimmers.** Check cold weather tools, such as leaf and snow blowers, along with their power cords, for unusual wear and tear. Repair or replace worn tools or parts right away.
- **Unplug and safely store battery chargers that won’t be in use again until spring.**
- **Use only weatherproof electrical devices for outdoor activities.** Protect outdoor electrical devices from moisture. Make sure electrical equipment that has been wet is inspected and reconditioned by a certified repair dealer.
- **Keep dry leaves swept away from outdoor lighting, outlets and power cords.**
- **Make sure electric blankets are in good condition and certified by an independent testing lab such as UL, CSA or ETL.** Power cords should not be frayed, cracked or cut. Do not tuck your electric blanket into mattresses or under children, and don’t put anything on top of the blanket while in use, such as comforters or bedspreads. Never allow pets to sleep on the electric blanket.

*Courtesy of the Electrical Safety Foundation International (ESFI)*

Visit us on the web at www.vermontelectric.coop
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 strives 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. Each year VEC employees team up with our friends at Johnson State College to host a fall and spring Blood Drive. And, what a tremendous success these drives are! The co-sponsored 2010 Spring Drive netted 129 productive units of blood making it the most productive spring drive at JSC since 1990. The record for JSC is 180 units, set back in October, 1986.

So, where do we go from here? October is National Cooperative Month and VEC employees will be found giving back to the community by volunteering their time and donating blood on October 20th from noon to 5 p.m. at Johnson State College. The goal is to break that all-time record of 180 units! We invite all members of the VEC community to come out and help us achieve our goal. Remember, a unit of blood has the potential to help save three lives!

Community Blood Drive

Wednesday, October 20, 2010
Johnson State College
Noon — 5 p.m.

A special invitation to VEC members and the community to join in the giving

To make an appointment contact Kelly Palmer at (802) 635-1471 or email Kelly.Palmer@jsc.edu

www.saveblood.org/giving/

The Seven Cooperative Principles

1. 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.

2. 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.

3. 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. Members allocate surplus to their cooperative. 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.

4. 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.

5. 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.

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

7. Concern for Community – While focusing on member needs, cooperatives work for the sustainable development of their communities through policies accepted by their members.
Coming soon to a meter near you: Smart Grid Customer Systems Pilot Study

by Randy Pratt, Manager of Government Relations

A s VEC installs more Smart Grid technology, we are under-taking a pilot study as part of the Department of Energy’s Smart Grid Investment Grant (SGIG) program. The “SGIG” is pretty straightforward in deploying smart meters and other technology – the DOE will reimburse half of what we spend on this essential equipment. In the next few years, all VEC members will have smart meters, and our system will be increasingly automat-ed. In fact, we are already realizing the benefits of this technology: our outage statistics are better than they have ever been! Much of the Smart Grid benefit is behind the scenes, but customer are a critical piece of a successful energy future. Smart meters allow customers to better manage their energy use in a variety of ways:

- A program like VEC watchWATCHERS gives members a detailed picture of their energy use, down to the hour. With that information, for example, VEC members can identify excessive energy use and take actions to lower their consumption.
- When coupled with various information technologies, customers can understand and identify when power is more or less expensive, and can choose to change their usage from high-priced to low-priced times of days.
- Homes can be automated so that appliances can be pre-programmed to run when electricity is cheap.

In order to learn what options work best and are most cost-effective, VEC will be working with Vermont Energy Investment Corporation (the parent company of Efficiency Vermont) to conduct a pilot program that will help answer this critical question. The Vermont “Consumer Behavior Study Plan” is one of only nine nation-wide to re-search this under the SGIG.

The plan is close to getting the green light from the Department of Energy. Once it does, approximately 1,250 VEC members will be selected to participate in a two-year study. Participation will be voluntary, but we will ask that those selected participate for the full two years. The study will test several different components of the Smart Grid. Equally sized groups will be selected, each with a different combination of elements:

- Web communications only
- Web communications with “pro-active customer service” (PCS) from Efficiency Vermont
- In-home displays with and without PCS
- Automated home appliances

In the second year of the study (once participants learn to use the technologies), all groups will then switch to a new rate called Variable Peak Pricing (“VPP”). This new rate will first need to be approved by the Public Service Board. VPP will allow for greater savings by pricing electricity low during most times, but high during “peak hours” of the day and during “peak events” when the entire New England system has very high use. Importantly, VPP carries the risk that customers could pay more! The lessons learned from the study will help VEC, Vermont, and the nation understand how much customers can use the Smart Grid to help themselves financially, while adding to the reliability and minimizing future costs of the entire electric grid.

We hope that participant selection will begin before the end of this year. To ensure fairness, members who meet eligibility requirements will be assigned to groups at random.

If you have questions regarding the pilot study please contact Sue Bernier, Manager of Member Service at 1-800-832-2667, extension 1216.

VTel Broadband Grant: Good News for VEC Members

L ast month, Vermont Telephone Company (VTel), of Spring-field, Vermont, was awarded $81 million in grant funding, and an additional $35 million in guaranteed loans to build an advanced broadband network that will provide high-speed internet access to nearly all Vermonters. The network will feature cutting-edge 4G “fourth generation” technology that will provide Vermonters with world-class connectivity.

The funding is provided by the Broadband Technology Opportunities Program (BTOP), administered by the National Telecommunications and Information Administration (NTIA). NTIA is an agency in the U.S. Department of Commerce that serves as the executive branch agency principally responsible for advising the President on telecommunications and information policies.

The benefits of the 4G network include high speed data transfer, seamless connectivity across networks, fewer dropped calls, next generation multi-me-dia support, and coverage to areas that are currently difficult to serve. Why does this matter to VEC members?

High speed internet access is essential to Vermont’s future. Without statewide access, economic development will be limited and rural Vermonters will not have access to modern communica-tions technology. Because a significant portion of VEC members do not have broadband access, VEC has been working closely to support VTel throughout the grant application process.

As a result of VEC’s smart grid initia-tive, miles of fiber-optic cable have been installed throughout our service territory. With a large amount of existing and planned fiber now available, the Co-op has offered parts of its fiber network to VTel in exchange for fiber on VTEL’s network. This agreement will enable VEC to connect its Johnson headquar-ters to the Newport service center with its own fiber by next summer. This link is important to VEC to ensure reliable operation of its system in the Northeast Kingdom. An added benefit is that this fiber will allow the Newport region to be able to provide essential bandwidth for their economic development activities.

Thanks to the work of VTel and the NTIA, along with support from Vermont’s congressional delegation, the economic development significance of this broadband revolution has been equated to “rural electrification” in the 1930s. As a cooperative, VEC values its relationship with VTel as high-speed internet access is expanded to meet the needs of rural Vermonters. We look for-ward to the positive impact this will have on all VEC members, especially those in the underserved parts of the service ter-ritory.

Benefits of a 4G Network

- High Speed Data Transfer
  - 1 gigabit per second is possible while the user and the cell station are in relatively fixed positions;
  - 100 megabit per second is possible while the user physically moves at high speeds relative to the cell sta-tion (while traveling); and
  - 100 megabit per second or more limited by two points in the world.

- Seamless Connectivity – fewer dropped calls
- Smooth handoff across networks will enable data downloads when traveling and global roaming across multiple networks.
- Interoperability with existing wire-less standards will allow existing equipment to continue to operate, instead of being replaced.

Wider Broadband Coverage

- Using micro-cellular networks called Femtocells, penetration to hard-to-reach homes and businesses will be enabled.

Next-generation Multimedia

- Real time audio, high speed data, HDTV video content, mobile TV, etc. will be supported.

Real time outage information when you need it most. Also available on cell phones.

Visit us on the web at www.vermontelectric.coop
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Vermont Electric Cooperative
Board of Directors

District 1
Don Worth  802-723-8032
P.O. Box 450, Island Pond, VT 05846
district1@vermontelectric.coop

District 2
John Ward  802-334-6022
145 Mt. Vernon St, Newport, VT 05855
district2@vermontelectric.coop

District 3
Priscilla Matten  802-323-8341
424 Lower Village Rd, Lowell, VT 05847
district3@vermontelectric.coop

District 4
Mark Woodward  802-625-7166
110 Woodward Rd, Johnson, VT 05656
district4@vermontelectric.coop

District 5
Michelle DaVia  802-922-2537
71 North Rd, Westford, VT 05494
district5@vermontelectric.coop

District 6
Daniel Parsons  802-848-3328
320 Hardwood Hill, Richford, VT 05476
district6@vermontelectric.coop

District 7
John Miller  802-372-8375
P.O. Box 21, North Hero, VT 05454
district7@vermontelectric.coop

Eastern Zone
Tom Bailey  802-766-2647
P.O. Box 114, Derby, VT 05829
eastzone1@vermontelectric.coop

Western Zone
Dorothy Allard  802-827-9779
1331 Waterville Mtn. Rd, Bakersfield, VT 05441
westzone1@vermontelectric.coop

Vermont Electric Cooperative was founded in 1938, and first managed by Harry Bowman to serve residents in parts of rural Lamoille County who had been bypassed by investor owned utilities. REA financing enabled most of VEC’s growth in the early years. At its origin, Vermont Electric Cooperative, homes, and businesses were soon added.

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