

### The Challenges of Renewable Energy Generation



By Michael P. McMahon

**R**enewable energy generation is a priority for our wholesale power supplier, Dairyland Power Cooperative. Member interest, improving technologies, and increasing regulatory requirements are some of the key drivers in the push to develop more renewable energy generation.

The challenge for Dairyland is to achieve renewable energy goals and requirements while

looking out for the interests of all 25 of its member cooperatives in Wisconsin, Iowa, Minnesota, and Illinois, including Vernon Electric Cooperative. Dairyland pursues opportunities to add a variety of forms of renewable generation to its power supply through a thoughtful process taking into account availability, project size and location, transmission issues, regulatory requirements, and cost.

#### Legislative Requirements

Dairyland needs to meet differing requirements in the four states where it does business, and — as importantly — anticipate future regulations through proper planning. A Renewable Portfolio Standard (RPS) is defined as the percentage of retail electric sales in the state that must be generated by renewable sources. These generally include wind, solar, geothermal and biomass generation. As it stands now, Wisconsin has an RPS of 10 percent by 2015; Minnesota has an RPS of 25 percent by 2025; Illinois calls for 8 percent by 2013; and Iowa requires utilities to offer a “green” program.

Renewable energy standards are under discussion in nearly every state and at the federal level. Following passage of Minnesota’s 25 percent RPS earlier this year, Wisconsin Governor Jim Doyle expressed his support for Wisconsin obtaining 25 percent of its energy from renewable energy resources as well. Meanwhile, Illinois just sent a 25 percent by 2025 bill to its governor, which increases the renewable energy requirements for public utilities (but exempts cooperatives and municipal utilities), and Iowa briefly considered a 20 percent RPS but opted instead to dedicate \$500 million to enhance the development of renewable energy infrastructure in its state.

On the federal level, a national RPS is anticipated at some point. The House of Representatives is expected to debate a 20 percent RPS by 2020 bill in August. Federal

legislation is unlikely to preclude states from establishing their own, higher, RPS. Questions remain about small utility or cooperative exemptions and how state laws will conform to a national standard.

Confused yet? Despite the complex regulatory situation, the implications for Dairyland and its member cooperatives are clear: more renewable energy generation will be required and plans are being made accordingly. As such, Dairyland has been steadily working to increase its already progressive renewable energy portfolio.

#### What’s Here and What’s Ahead

Dairyland issued two requests for proposals (RFPs) earlier this year seeking renewable power resources from wind and biomass generation facilities. The wind RFP sought proposals for a minimum of 20 mw of capacity no later than 2010. Responses to the wind power RFP were due in June. Dairyland will be making a decision soon regarding the responses it received from the wind energy RFP.



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In the meantime Dairyland has just finalized a purchase agreement with Horizon Wind Energy and Great River Energy for 5 mw of renewable electricity. The Prairie Star Wind Farm that this electricity will come from is located in southeast Minnesota near Elkton. The farm will produce enough electricity to power about 36,000 homes.

Currently complicating wind expansion is the basic problem of supply and demand. The worldwide demand for wind generation has greatly increased costs and constricted turbine supply in the renewable market. Production of wind turbines is not currently meeting demand, sometimes requiring extensive waits for necessary equipment.

The biomass RFP seeks proposals for a total of at least 20 mw of capacity no later than 2015. Responses to the biomass RFP were due on July 31 and are being reviewed. This biomass will supplement Dairyland’s

*(Continued on page 29 ►)*



# SAVE TIME AND MONEY

**And receive \$10 off your electric bill immediately!**

**V**ernon Electric Cooperative offers E-billing and the Automatic Payment Plan. You can save time and money with both options.

Tired of writing out checks to pay your electric bill? Then it's time to sign up for Electronic Bill Payment (E-bill) and the Automatic Payment Plan.

## E-Bill – Get \$5 Off

E-bill gives you the ability to instantly view information about your bill from your home, office, or any place that you have access to the Internet.

To get started, simply access the e-bill site by visiting Vernon Electric's web site: [www.vernonelectric.org](http://www.vernonelectric.org).

- Have your Vernon Electric account number ready
- Click on "E-Billing" at the top of the home page
- Follow the appropriate instructions on the screen and then click on "submit"

It's that easy and you're on your way to accessing your account. Not only can you look at the current bill that would have actually been mailed to you, but you also have the capability of looking back at previous months' bills and payments too.

Not only do our members benefit, but it also saves time and money for Vernon Electric by eliminating the need to print monthly bills, process payments, and for the most obvious of reasons — it eliminates postage costs. Once you decide to sign up, Vernon Electric will e-mail a notification that the bill is ready to view online, along with a link to Vernon Electric's web site. A bill will no longer be mailed to you after this point.

## Automatic Payment Plan – Get \$5 Off

If you have an account with a credit union or bank, you can now pay your Vernon Electric bill each month without lifting a finger.

### Here's how it works:

Each month you'll receive your electric bill by mail, or, if you sign up for E-billing, you will receive your bill

by e-mail. Then on the 20th, your financial institution will automatically deduct your payment from your checking or savings account. This gives you plenty of time to call if you have any questions.

The Automatic Payment Plan saves time and postage, and your bill is always paid by the due date. You never have to worry about a penalty charge.

### Advantages of E-Billing and Automatic Payment Plan together:

- \$10 one-time bill credit for initial enrollment.\*
- Your electronic statement is always delivered in a timely manner. No mail delays.
- No more paper to deal with or recycle. Saves trees.
- No check fees.
- Easier record keeping and easier access to your past statements.
- Statement can be viewed anywhere there is a computer and Internet access.
- Save time. You won't have to write a check or send in a payment anymore.
- Save a stamp and save money.
- No bills lost in the mail.
- No worries about late payments. The bill is always paid on time.
- Earn more interest on your money because your payment isn't withdrawn from your financial institution until the 20th of the month.
- Your co-op benefits by having less mail processing to do and less postage cost.

Please use the Automatic Payment Plan Authorization form found on page 29 of this issue to sign up, or you can download the form from our homepage at [www.vernonelectric.org](http://www.vernonelectric.org).

If you have any questions, please contact Vernon Electric Cooperative at 608-634-3121, 1-800-447-5051, or [vec@mwt.net](mailto:vec@mwt.net). Office hours are Monday through Friday from 7:30 a.m. to 4:30 p.m. ■

*\*If you do not participate in the programs for 12 months, the bill credit will be charged back to you.*

# Two New Rebates You Should Know About

## LED Holiday Light Strings \$2.00 per string

With the holiday season just around the corner, now is the time to think about energy efficiency with holiday lighting. LED (Light Emitting Diode) holiday light strings are typically up to 10 times more efficient than the traditional mini-bulb incandescent strings we've used in the past. Not only are they more efficient (and cost less to operate), but also many will tell you they look nicer. If that isn't enough to convince you, they also last longer. Many will come with a multi-year warranty because LED lights are so durable. You can expect them to work year after

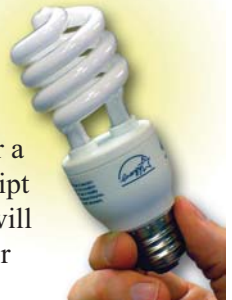


year for many years to come. So make sure the next string of holiday lights you purchase are marked "LED," and then send in a copy of your receipt to Vernon Electric to receive a \$2.00 credit on your electric bill for each string you purchase. LED light strings must be purchased before 12/31/07 to receive a rebate.

## Compact Fluorescent Lamps \$2.00 per bulb

Compact Fluorescent Lamps, or CFLs, use up to four times less electricity for the same amount of light than your traditional incandescent bulbs. They also last longer — up to 10 times longer or more. As the technology has been improving, so have the shapes, styles, colors, and other options. You can now buy CFLs for dimmer switches, three-way lamps, floodlights, canned lights, chandeliers, and vanities. You can also get them in "warm" or "cool" colors. Many of the larger hardware stores with lighting departments will have a good selection of CFLs.

Once you've purchased your CFLs, if you're a member of Vernon Electric Cooperative, you can apply for a rebate. Just send in a copy of your receipt with the proper rebate form and VEC will put a credit on your next electric bill for \$2.00 per bulb up to two bulbs. ■



### LED and CFL Incentive Form

Vernon Electric Cooperative  
110 N. Main St. Westby, WI 54667

Attached is copy of my receipt for:

- LED holiday light string (expires 12/31/07)  
 CFL bulb (2 bulbs max.)

Qty. \_\_\_ x \$2

Qty. \_\_\_ x \$2 (not to exceed lamp cost)

Name \_\_\_\_\_

Account Number \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

I certify that the incentive payments requested are for compact fluorescent lamps or LED holiday light strings installed in the last 30 days at my home, farm, or business on Vernon Electric Co-op lines and meet all requirements.

Member Signature \_\_\_\_\_

Date \_\_\_\_\_

*Please attach a copy of your receipt. Once your application is approved, a credit will appear on your next electric statement for the lamps you purchased.*

### Automatic Payment Plan Authorization Form



Name(s) shown on VEC bill \_\_\_\_\_

VEC account number \_\_\_\_\_

Billing address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Work phone \_\_\_\_\_ Home phone \_\_\_\_\_

Your financial institution \_\_\_\_\_

Financial institution address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Your financial institution account number \_\_\_\_\_

Checking (include a voided blank check)       Savings (enclose a deposit slip that includes your account number)

VEC has the right to cancel my use of the Automatic Payment Plan. I will write to VEC if I decide to cancel my use of the Automatic Payment Plan. If I do not participate in the Automatic Payment Plan for 12 months, the \$5 credit will be charged back to me. ALSO, in the event there are insufficient funds in my account within the 12 month period of time, the \$5 credit will be charged back to me.

Signature(s) \_\_\_\_\_ Date \_\_\_\_\_

*Note: If the account is in two names, both account holders must sign here. Mail this form with your current payment or mail it separately to Vernon Electric Cooperative.*

## Renewable Energy *(Continued from page 4)*

existing investment in manure digester and landfill gas facilities in its system. Both the wind and biomass proposals could take the form of either long-term power purchase agreements, or the sale of a facility to Dairyland.

A summary of Dairyland's current and planned renewable generation follows:

- 22 mw of water-powered generation from Dairyland's Flambeau Hydro Station, Ladysmith.
- 18.5 mw of wind generation from three projects.
  - 15 mw of additional wind power from the G. McNeilus Wind Energy Co. and Horizon Wind Energy Co. will be brought online for Dairyland members in early 2008.
- 11 mw landfill gas from three facilities, with additional generation coming in planned expansions. Includes:
  - 3 mw Veolia ES Seven Mile Creek landfill gas-to-energy (LGE) facility, Eau Claire. Generating units are owned by Dairyland. This plant will add a 1 mw generating unit in spring 2008.
  - 3.2 mw Timberline Trail Landfill Generating Station, Bruce. Power purchase agreement with Waste Management, Inc. This plant will increase by 2.4 mw in 2008.
  - 4.8 mw Central Disposal Landfill Generating Station, Lake Mills, Iowa. Power purchase agree-

ment with Waste Management, Inc.

- Dairyland and Allied-BFI are finalizing agreements to develop the 2.4 mw Lake Area Landfill Generating Station. Construction should begin in 2008.
- 2.4 mw of animal waste "cow power" from three dairy farm manure digesters (Elk Mound, Rice Lake, and La Farge). Dairyland-owned generation. Plans for more manure digester facilities in Dairyland's service territory are underway.

For detailed information on Dairyland's renewable energy generation, see [www.dairyland.net](http://www.dairyland.net).

Vernon Electric's members can support renewable energy by participating in the Evergreen Program. For more information, contact our office at 608-634-3121, 800-447-5051, or [vec@mwt.net](mailto:vec@mwt.net). You can also read more about the Evergreen Program at [www.vernonelectric.org](http://www.vernonelectric.org). ■



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