

A WORD FROM



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Let's talk about load management

We mention load management quite often. Load management is, in effect, load shaping. It is an attempt to modify patterns of electrical usage. One reason we installed the demonstration solar array at Horton was for load management. It is also why we install load control receivers (LCRs) on electric water heaters.



Our Horton solar array.

SOLAR One of the goals in installing a solar array was to “peak shave” during the summer. This means when usage is high due to air conditioning, the array balances the load by converting sunlight into electricity put back on the grid. This “shaves” demand during “peak” because the electricity being used is, in essence, replaced.

When discussing solar array production, we talk about the capacity factor—the comparison between actual output to full production at full capacity, if that was possible. The average capacity factor for an array is 16 percent annually. The dual panels (facing north and south) on our array allow for the possibility of a higher capacity factor. Our array's capacity factor for January through July of this year was just over 20.5 percent, and we are encouraged by the results.

LCRs We began installing LCRs in 2013, and in 2017 saw a savings of \$53,000. At the end of July of this year we had over 250 installed for this voluntary program. In addition, over 130 members have Peak Alert devices so those members are able to monitor when our system is approaching and at peak demand. They are then able to possibly shift electrical usage to reduce demand on the system.

The success of the LCR program is built over time. It is a marathon, not a sprint. The more members participating in our LCR program, the more savings. Help us, help you—contact us today if you have an electric water heater and would like an LCR installed.

Just as your board voted to install the solar array for research, development and education, they continue to look to the future for other avenues of energy savings, including battery technology for load management and other advancements.



A load control receiver.

Because like you, the cooperative is always looking for savings opportunities.

The cooperative advantage

- Electric co-ops are **community-focused organizations** that deliver safe, reliable and affordable energy.
- Our electric co-op is unique because **we belong to the communities we serve**. The co-op is **led by its members**, which gives us an understanding of the needs of our communities.
- We answer to local members (that's you!) rather than far-away shareholders, so **we're able to respond quickly to the changing needs of our community**.
- We share any excess revenue with our members because **we're not-for-profit**.
- Even though we're locally owned and operated, **we cooperate with other electric cooperatives** across the country to develop new technologies, invest in equipment and infrastructure that benefit multiple co-ops in a region and assist with major outages.

Our electric co-op was built by the community, belongs to the community and continues to be led by the community—that's the cooperative difference!



The Duane Arnold Energy Center at Palo.

Iowa's only nuclear plant to close in 2020

On July 27, NextEra Energy, the operating owner of the Duane Arnold Energy Center (DAEC), Iowa's only nuclear power plant, announced that commercial operations at the Palo plant will cease in 2020. Next Era and Alliant Energy have agreed to shorten the term of their existing power purchase agreement for the output of the plant by five years in exchange for a buyout agreement.

Corn Belt Power Cooperative, power supplier to your cooperative, owns 10 percent of DAEC and sells the output of its 61-megawatt share to Basin Electric Power Cooperative, Bismarck, N.D. Any negative impact of the early 2020 closure to member cooperatives has been diminished through Corn Belt Power's membership in Basin Electric, which has adequate supplies of generation to cover all member cooperatives' needs.

Ken Kuyper, executive vice president and general manager, Corn Belt Power, said, "Corn Belt Power has valued DAEC as a well-run, reliable source of emission-free power that is available 24/7. Although we were prepared to have the plant continue to operate through its 2034 license, we still have an adequate supply of power to serve our member cooperatives."

With an immediate focus to minimize any financial impact that early closure may have on its membership, Corn Belt Power plans to modify its internal accounting procedures to reflect the change in the plant closure date.

Alliant Energy and NextEra Energy said the existence of cheaper forms of energy prompted the decision to shut down DAEC. The market value of other sources — primarily renewables such as Iowa's growing wind portfolio — have dropped below the cost of nuclear generation.

Tips for a Safe Harvest



Harvest season brings hard work and can be an exhausting, but rushing the job to save time can be extremely dangerous (even deadly!) when working near overhead power lines. We urge farm operators and workers to keep the following safety tips in mind:

-  Use care when operating large machinery near power lines.
-  Inspect the height of equipment to determine clearance.
-  Always keep equipment at least 10 feet away (in all directions) from power lines.
-  Remember to lower extensions when moving loads.
-  If a power line is sagging or looks to be dangerously low, please call us immediately.




**MOVE OVER
SLOW DOWN**

WHAT THE SIGN REALLY SAYS IS - MOVE OVER OR SLOW DOWN. Iowa law requires motorists to change lanes or slow down when approaching a stationary utility vehicle that has its flashing lights activated. Failure to do so can result in hefty fines or the loss of your driver's license.

Take the Pledge. Join your fellow Iowans who have pledged to move over or slow down for Iowa's utility workers at moveoveriowa.com.

Solar surges in rural communities

Five years ago, many people in the electric industry viewed solar energy as more of an energy accessory than a power supply option.

At local electric cooperatives, member-consumers were asking questions about whether this new technology would be suitable for their home or for the cooperative.

Given the high cost, electric co-ops had questions about the economic feasibility of solar installation and its effect on the electric system.

To answer these questions, co-ops started installing small arrays and analyzing costs and efficiency.

As the solar industry grew, thanks in part to tax credits and other policy incentives, the cost of solar panels and other equipment started declining.

In 2014, 17 electric co-ops joined with their national trade organization, the National Rural Electric Cooperative Association (NRECA), to collaborate on solar installations in 10 states whose combined solar capacity would be 23 megawatts.

Over the course of this project, the cost of solar fell dramatically. For example, one co-op that built a solar installation at the beginning of the project and another one two years later, found the cost was half what it had been two years earlier. In 2013, the cost was \$4.50 per watt of installed solar, and in 2016, the cost was \$1.74 per watt.

With the decline in costs and the increase in knowledge, today America's electric co-ops own or purchase more than nine times as much photovoltaic solar power as they did in 2013. By the end of 2019, the combined solar capacity of America's electric cooperatives is expected to surpass a gigawatt (enough energy for about 700,000 homes).

Prepare your home for the colder days ahead

Heavy accumulations of ice and snow along with changing temperatures can bring down utility poles, trees and limbs with the ability to disrupt power for days. With this comes a threat to property and life.

Be prepared for dangerous snow and ice storms and the power outages they may cause—including preparing your home:

- Insulate walls, attics and pipes.
- Caulk and install weather-strips on windows and doors.
- Install storm windows or plastic sheeting to cover windows.
- Repair roof leaks.
- Ask your co-op to cut branches away from your home and power lines.
- Always keep a battery-powered radio or TV, flashlights and a supply of fresh batteries.
- Know where to find extra blankets.
- Keep a supply of bottled drinking water on hand and a supply of non-perishable food items, along with a hand opener for canned food.
- Consider installing ground fault circuit interrupters (GFCIs) for electrical outlets in areas that might be affected by melting snow or ice.
- If you use a standby generator, make sure it has a transfer safety switch or that your power is cut off at the breaker box before you operate it. This prevents electricity from traveling back through the power lines, or what is also known as back feed. Back feed creates danger for anyone near power lines, particularly crews working to restore power. Be sure to let your cooperative know that you have a generator.



Can Homeward, Inc. help you?

Homeward, Inc., established in 1996, assists

rural Iowa families with their housing needs

and helps small communities and employers in rural Iowa.

This is accomplished through their programs, which focus on making homes more affordable and easier to maintain.

Homeward offers the following services:

- Community Home Construction and Revitalization Programs
- Downpayment Assistance
- Energy-Efficiency Loans
- Geothermal Heat Pump Loans
- Minor Repair Financial Assistance
- Trust Fund Grants and Loans
- Well and Septic Loans

Visit homewardiowa.com or call Cheryl Rhead, program manager, at 515.532.6477.



Do You Know . . .

How an apprentice lineman becomes a journeyman?



Just like earning a degree from college, becoming a journeyman, or first-class lineman, takes four years. From their date of hire, the apprentice begins working through the eight steps required for first-class status. But first, the title of second-class lineman is earned after two years, or four steps. The designations are earned performing hands-on work, moving up one step every six months.

An apprentice is allowed to work in a bucket truck if the line is de-energized. A second-class lineman works in a bucket truck on hot line but a first-class lineman must also be in the bucket. With the first-class designation, the lineworker works on energized lines in a bucket truck alone but with an observer.

At Butler County REC, we have one apprentice lineman, five first-class linemen, eight crew chiefs (first-class linemen in charge of the truck they are in) and two coordinating crew chiefs (one out of our Allison warehouse and one out of our Horton warehouse).

Summer construction update

According to John Endelman, Butler County REC operations manager, our line crews are about halfway through their construction work plan. This is work planned in advance every year.

They have also completed 127 work orders. Work orders include any project that members call in and need completed, for example, rebuilding a service or building line for a new home.

Pay-by-Phone



Don't forget that you can pay your bill with Pay-by-Phone, which is free and available 24/7.

Instead of calling our office to make a payment, call **844.749.3051**. You will need either the primary phone number listed on your Butler County REC account or your Butler County REC account number, and you will need the last four digits of the Social Security number listed on your Butler County REC account.

As always, if you have questions or concerns, call us at 319.267.2726 or 888.267.2726.

Be Watts Smart!

- Reducing peak demand is wise energy use that helps reduce costs – for you and for Butler County REC.
- A load control receiver connected to your water heater will automatically – and virtually unnoticed – operate to manage electric use during peak demand times.
- If you have an electric water heater, you can participate.
- Receive a one-time \$10 incentive for participating.
- Receive a FREE Watts Smart Peak Alert device to monitor system demand.

watts
smart

Contact our Energy Efficiency Department for more information.

Member pricing for water heaters

Model	Retail Cost	Member Rebate*	Member Cost**
50 gallon - tall or short	\$899	\$600	\$299
85 gallon	\$1,199	\$900	\$299
105 gallon	\$1,349	\$900	\$449

*Load control receiver (LCR) will be installed on the unit. Rebated cost dependent on installation of LCR.

**Plus tax applied to the retail cost.

Additional \$300 discount for a unit installed in a member's new home or when replacing a gas water heater.

Contact our Energy Efficiency Department for more information.



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