

POWERLINE

NEWSLETTER FOR CO-OP MEMBERS OF CORN BELT ENERGY



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POWER-ing Efficiency

As an 10th generation farmer, Mike Ferrill knows a thing or two about choosing investments that produce long-term savings and revenue returns. Farming is a long-view endeavor - one the Ferrill family has been pursuing on their land in rural Oreana, Illinois, for the better part of a century – and it's filled with big investments, from land to equipment. Knowing how to identify opportunities for efficiency and savings is an important part of a successful farmer's operational arsenal.

Better control for greater efficiency

Mike, a Corn Belt Energy member for almost forty years, farms over 3700 acres of corn and soybeans with his son, Brent, on a farm he took over from his parents. The connection with Corn Belt Energy extends beyond Mike's four decades, however, as Mike's parents have been Corn Belt Energy members for more than sixty years.

The relationship with the cooperative is one Ferrill's have utilized to find efficiencies in the past. Taking advantage of Corn Belt Energy programs designed for residential members, they have previously installed an energy efficient water heater and put a geothermal heating system in their house. The ability of these energy solutions to save money and pay for themselves over a period of several years was something that

aligned with the Ferrills' long-term vision.

This same vision was instrumental in building the grain handling system the family chose to run their farming operations. Mike and Brent utilize a custom-designed, continuous counter-flow drying and storage system built by grain drying bin company Shivers Manufacturing. The system features two grain unloading pits, which can accommodate semi-trailer loads of grain directly from the field. Once unloaded into the pits, two augers transport the grain to the drying bins. Sensors in the bins continuously monitor the moisture of the grain, applying heat and air to help dry it to optimal moisture levels for eventual transport and sale.

The Ferrill's auger transport and drying system are controlled by an aggregate 100 horsepower of motors – one 50 horsepower motor, one twenty horsepower motor, and two fifteen horsepower motors that run the unloading pit augers. During harvest season, these motors run non-stop, shuttling loads of grain between the pits and the drying bins.

Getting control of the idle times of these motors – and increasing the operational efficiency of the entire system - led Ferrill's to discussions about installing variable speed drives (also known as VSDs or variable

frequency drives - VFDs) with Decatur-based electrical contractor Heartland Electric and Equipment. The variable speed drives would reduce the drying system's electrical usage during idle periods by cutting the motors' speed and torque, reducing the wear and tear on the motors themselves and reducing the electrical draw of the entire system, which would provide a significant cost savings over the long term. Ferrill's were intrigued by the efficiency and savings options, and the electricians at Heartland suggested applying to Corn Belt Energy's POWER MOVES rebate program to enhance the affordability of the variable speed drives.

Making the move to POWER MOVES®

The decision to use the POWER MOVES program to purchase the variable speed drives was confirmed by the simplicity of the application process and the support Ferrill's received from Heartland Electric and Equipment, as well as the POWER MOVES program administrator.

"The whole thing was pretty seamless. We worked with Heartland Electric and Equipment to fill out and send in the original application, including some pictures of the drives we were interested in purchasing and schematics showing how they would fit within the existing grain handling system," says Mike. "The program administrators had some questions,

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and Heartland Electric and Equipment were able to answer those on our behalf using more system drawings and equipment specs. Then the entire application was approved. From our standpoint, it was pretty hands-off, and it couldn't have been simpler!"

The impact of the POWER MOVES rebates on the cost of the project was immense. Variable speed drives designed and built for industrial and agricultural applications like the Ferrill's are expensive, and the POWER MOVES rebate program was able to cover the cost of the drive for the largest, 50 horsepower motor, which accounted for about one-third of the program's total cost. The remaining two-thirds of the project's costs were covered by Ferrill's, and the family expects to recoup their investments within a couple of harvest seasons. The overall experience of working with the POWER MOVES rebate

program and installing the variable speed drives is one Mike Ferrill still views as a long-term advantage to his farming operation. He offers any farmers considering an upgrade to a variable speed drive-managed system a few words of advice.

"Definitely find a contractor experienced in designing for and installing them. Heartland Electric and Equipment was a great partner to have in this process. Also, talk to people who have them, and especially people who use them in ways similar to the way you'll be using them. Those people can give you some insights into how the drives work, things to consider, things to watch out for, and valuable pieces of information you can use in making your final design and purchase decisions," he explains. "If you do your research, I can't think of any reason not to install a variable speed drive system, especially in a

drying system like ours. They are expensive at first, but worth it in the long run."

And Mike endorses the POWER MOVES program for many of the same reasons.

"The cooperative rebate programs are so simple and straightforward, and they help so much with project costs, I would recommend them to anyone thinking about a switch to VSDs. Your contractor and your cooperative are two of the best partners you can have in this type of project!"

To learn more about the POWER MOVES rebate and incentives programs and other energy efficiency initiatives, please contact Jeremy Myers, Energy Advisor at jeremy.myers@cornbeltenergy.com or by phone at 800-879-0339 x221.

Geothermal heat pump federal tax credits reinstated

Federal tax credits for geothermal heat pumps were recently reinstated by the federal government. Residential consumers are eligible for a 30 percent federal tax credit for installing a geothermal heat pump system in their home. The reinstated tax credits are retroactive to Jan. 1, 2017, meaning that anyone who installed a geothermal system in their home in the past 14 months now qualifies for the tax credit. The tax credits are extended through Jan. 1, 2022, through a phase out plan in which the credit is reduced to 22 percent before ending.

The geothermal tax credit was part of a measure to extend the tax incentives to renewable energy technologies like geothermal heat

pumps, combined heat and power systems, microturbines, small wind systems, fuel cells, etc., that were taken out of the legislation passed by Congress two years ago, extending the tax credits for the solar industry. In addition to the residential tax credits, there is also a 10 percent investment tax credit for commercial geothermal systems that was also extended.

The National Rural Electric Cooperative Association joined with a coalition of many national and state organizations to support reinstatement of the tax credits. The cooperatives are appreciative of the efforts of Rep. John Shimkus and several other Illinois Congressmen who sponsored legislation leading to

the tax credit reinstatement. The tax credit extension was part of the Continuing Resolution action by the Congress in early February to fund the federal government.

“We are appreciative of our leaders’ support for geothermal heat pump technology and providing parity with the other renewable energy technologies,” said John Freitag, executive director of the Geothermal Alliance of Illinois. “Geothermal heating and cooling is by far the most efficient and effective way known today to heat and cool our homes and businesses. The tax credit extension helps to make installation of a geothermal heat pump the obvious best choice for heating and cooling.”

GeoCents makes geothermal more affordable for members

Whether you are in the process of new construction, updating HVAC systems or just looking into geothermal as a heating and cooling alternative, Corn Belt Energy's GeoCents program makes geothermal more affordable for our members.

As a part of this program, Corn Belt Energy will pay to have the geothermal loops (the outside loops that go into a member's yard) installed at a member's home. In turn the member will pay a monthly fee to be able to utilize the loops.

Participating members will receive:

- \$1,100/vertical ton & the member will pay \$7/ton/month on their electric bill
- \$900/horizontal ton & the member will pay \$6/ton/month on their electric bill
- Corn Belt Energy also has a \$1,500 rebate for the installation of a geothermal that utilizes electric as the backup

Corn Belt Energy will do an initial face-to-face meeting explaining all of the program details and a review of the interested participant's current heating and cooling system. All participants must utilize a certified HVAC contractor and geothermal looper for installation. Both new construction or retrofits qualify for the program.

Corn Belt Energy is focused on serving our members while promoting overall energy efficiency and environmental stewardship. The GeoCents program is an example of this focus.

For additional information about the Corn Belt Energy GeoCents program or for the most up-to-date GeoCents certified HVAC and looper contractor list, please contact Jeremy Myers, Energy Advisor at jeremy.myers@cornbeltenergy.com or by phone at 800-879-0339 x221.



Meet Jeremy Myers

Jeremy joined Corn Belt Energy as Energy Advisor in December 2017. Jeremy's experience includes working with renewable energy as well as over a decade of specifically working with geothermal. Jeremy recently received his Building Performance Institute Building Analyst and Envelope Professional certification.

Jeremy is a part of our Member Services department and serves as the primary contact for Corn Belt Energy's commercial and residential rebates and incentives, energy efficiency programs, energy audits, surge protection orders, questions about energy usage and high bills, and much more.



Always call 811 before you dig

Spring is an optimal time of year to dream up and achieve your landscaping masterpiece, but in many parts of the country, planting shrubs in early fall gives the plants a head start at establishing roots in the season's cool, moist soil. Perhaps you're planning to build a new deck to enjoy those warm summer evenings. If any of your projects require digging—such as planting trees or shrubs, or setting posts—remember to dial 811 first.

Underground utilities, such as buried gas, water and electric lines, can be a shovel thrust away from turning a fall project into a disaster.

Play it safe by dialing 811 to find out where utility lines run on your property. Your call will be routed to a local “one call” center. Tell the operator where you're planning to dig and what type of work you will

be doing, and affected local utilities will be notified. In a few days, a locator will arrive to designate the approximate location of any underground lines, pipes and cables. These areas will be marked with flags or paint so you'll know what's below. Then the safe digging can begin.

Although many homeowners tackling do-it-yourself digging projects are aware of “Call Before You Dig” services, the majority doesn't take advantage of the service. A national survey showed that only 50 percent of homeowners called to have their lines marked before starting digging projects, according to the Common Ground Alliance (CGA), a federally mandated group of underground utility and damage prevention industry professionals. CGA data also shows that an underground utility line is damaged every six minutes in the U.S. because someone decided to dig

**Know what's below.
Call before you dig.**



without first dialing 811.

Even simple tasks like installing a new mailbox post can damage utility lines, which can disrupt service to an entire neighborhood, harm diggers and potentially result in fines and repair costs.

Never assume the location or depth of underground utility lines. There's no need: the 811 service is free, prevents the inconvenience of having utilities interrupted and can help you avoid serious injury.

For more information about local services, visit www.call811.com.

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